

**DATE:** August 30, 2017

**FILE:** 8550-03

**TO:** Chair and Members  
Integrated Regional Transportation Select Committee

**FROM:** Russell Dyson  
Chief Administrative Officer

**RE:** Comox Road – Multi-Use Path Option

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### **Purpose**

The purpose of this report is to provide the Integrated Regional Transportation Select Committee (IRTSC) with the results of the Comox Road active transportation technical workshops.

### **Policy Analysis**

At the February 28, 2017 meeting of the Comox Valley Regional District (CVRD) board, the following motion was passed:

THAT the concept of a multi-use path along Comox Road be presented in a letter from the integrated regional transportation select committee chair to K'ómoks First Nation, the Town of Comox and the City of Courtenay and include a request to appear as a delegation at K'ómoks First Nation, Town of Comox and City of Courtenay council meetings to describe the benefits of the project.

### **Executive Summary**

As indicated in an April 2017 report to the IRTSC, next steps in development of the Comox Road multi use path project included stakeholder engagement through a series of technical workshops. Wedler Engineering was hired by the CVRD in late April to complete the scope of work attached to the April 2017 report. Two workshops were hosted in June 2017, with staff representing the CVRD, City of Courtenay, Town of Comox and K'ómoks First Nation (KFN) in attendance. Wedler's complete report is attached as Appendix 'A', and the key points are summarized below.

Facilitated discussions at the workshops resulted in the emergence of the following themes:

- Consultation with KFN via presentation to the Band Council is critical next step.
- The estuary is of significant ecological and cultural importance and this project has the potential to enhance community understanding and recognition of the estuary and of KFN territory through interpretive signage and defined access/no access points.
- Larger shared vision for community corridors that involves all jurisdictions and community would support project success. There are also opportunities to integrate this visioning process into upcoming community planning documents/renewals.
- Both recreation and commuter focus and designated paths are a priority – commuter focus supports health, traffic and congestion goals. Recreation focus provides valuable community amenity, provides a pathway for future generations of commuters, and builds cycling and wellness culture.
- Campbell River and Courtenay River way are both great projects to hold up as examples to celebrate and rally around. They enhance the experiences of both residents and visitors.
- Third party community partners for a Comox multi-use path could help build broad based community and political support.

In terms of a preferred design direction, the workshops identified both a commuter cycling lane and separate recreational trail as priorities. Based on the outcome from the workshops, the two cross sections proposed by Wedler include a buffered cycle track and bike lanes, both including the option of a separated recreational trail on the estuary side. The preferred option to implement along the corridor is the buffered bike lane and trail, with the bike lanes option used where constraints such as right-of-way width or physical features don't allow enough space for buffers and/or trail. Wedler has also included in their report a preliminary cost estimate of approximately \$3.2 million, including engineering fees and a 30 per cent contingency.

Next steps for the project are to further these design concepts to a preliminary design phase, using the topographic survey information recently collected by the Ministry of Transportation and Highways. A budget of \$25,000 is suggested to advance this work, with contributions to be requested from each municipal jurisdiction. This request will be part of the presentation of workshop results to boards and councils.

**Recommendations from the Chief Administrative Officer:**

1. THAT the results of the Comox Road technical workshops be presented to K'ómoks First Nation Chief and Council, City of Courtenay Mayor and Council, Town of Comox Mayor and Council, and the Comox Valley Regional District Board.
2. THAT a financial contribution to preliminary design costs for a Comox Road multi-use path be requested from each municipal jurisdiction (Comox Valley Regional District, City of Courtenay and Town of Comox).

Respectfully:

***R. Dyson***

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Russell Dyson  
Chief Administrative Officer

Prepared by:

Concurrence:

Concurrence:

***M. Zbarsky***

***T. Ian Smith***

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Vince Van Tongeren, B. Sc  
Policy and Sustainability  
analyst

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Michael Zbarsky, B.Sc. AScT  
Manager of Transit and  
Sustainability

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T. Ian Smith, MCE  
General Manager of  
Community Services

Attachments: Appendix A – “Wedler Engineering Summary Report – Comox Road multi-use path technical workshops”

Wedler Engineering LLP  
211-2459 Cousins Avenue  
Courtenay, BC V9N 3N6



**WEDLER**  
ENGINEERING

August 24, 2017

Wedler File Ref: V17-0287/A

Comox Valley Regional District  
600 Comox Road  
Courtenay, BC V9N 3P6  
Via email: [vantongeren@comoxvalleyrd.ca](mailto:vantongeren@comoxvalleyrd.ca)

Attention: Vince Van Tongeren, B.Sc., Policy and Sustainability Analyst

**Reference: Comox Road Multi-Use Path Project Technical Workshops Summary Report**

Per the terms of reference issued to Wedler Engineering LLP (Wedler) by Comox Valley Regional District, this letter presents a summary report of initial meetings and workshops conducted for the proposed Comox Road Multi-Use Path Project.

## Background

Comox Road, 1km south of Highway 19a, was identified as a priority for roadside greenway improvements for cyclists and pedestrians in the 2014 Transportation Road Network Plan (TRNP). It serves as a main transportation link between the Town of Comox (Town) and City of Courtenay (City), and between the K'omoks First Nation (KFN) and the adjacent communities.

The Comox Valley Regional District (CVRD) has provided numerous strategic policy documents to guide transportation and identify priority links for active transportation within the regional district. The existing road ROW, while varying in size, is wide enough to allow the construction of bike lanes along the entire length of the



*Fig 1: Aerial View of Comox Road*

corridor. The type of bike lane will depend on the accurate width that will be determined by completion of detailed topographic survey. The proposed multi-modal project lies within the jurisdictional boundaries of the CVRD, Ministry of Transportation and Infrastructure (MOTI), the City, Town and KFN.

Comox Road is also located adjacent to an ecologically sensitive landscape which includes an estuary and regional parks.

This letter report presents a summary of two technical workshops conducted to develop a partnership on pathway funding/design/construction involving all jurisdictions.

## Start-Up Meeting

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On May 4<sup>th</sup> 2017, a start-up meeting with four representatives from CVRD, and Meaghan Cursons occurred to establish a framework and goals for the two-Comox Road Multi-Use Path Technical Workshops. The purpose of the workshops was to engage KFN, City, Town, CVRD, and MOTI staff in a technical discussion in order to seek consensus and develop a preliminary proposal for the Multi-Use Path on Comox Road for presentation to the Integrated Regional Transportation Select Committee (IRTSC) and Local Government councils and boards. The Start-Up Meeting Minutes are included in *Appendix A*.

## Workshop 1

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Technical Workshop #1 was held on June 13<sup>th</sup> and attended by representatives from the City, Town, CVRD and MOTI. The specific goals of the workshop was the presentation of background information on Traffic and Congestion Theory, facilitating a discussion on the need, challenges, and opportunities for a Comox Road Multi-Use Path, and creating an inventory of relevant projects and planning documents that relate to the project. *Appendix B* provides a package of the agenda, slide show presentation, and notes taken from first workshop.

## Workshop 2

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Technical Workshop #2 was held on June 28<sup>th</sup> and attended by representatives from KFN, the City, Town, CVRD and MOTI. The topics that were addressed during the workshop included presenting background information on bike lane standards and options to the participants, facilitating discussion on possible cross-section designs, project constraints and points of interest, opportunities, and additional questions to be answered. Feasible steps for the advancement of the projects with respect to the jurisdictions of the participants were explored during the workshop. *Appendix C* provides a package of the agenda, slide show presentation and notes from first workshop.

## Emergent Themes

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The following themes emerged from both workshops:

- a) Consultation with KFN via presentation to the Band Council is critical next step.
- b) The Estuary is of significant ecological and cultural importance and this project has the potential to enhance community understanding and recognition of the estuary and of KFN Territory through interpretive signage and defined access/no access points.
- c) Larger shared vision for community corridors that involves all jurisdictions and community would support project success. There are also opportunities to integrate this visioning process into upcoming community planning documents/renewals.
- d) Both Recreation and Commuter focus and designated paths are a priority – commuter focus supports health, traffic and congestion goals. Recreation focus provides valuable community enmity, provides a pathway for future generations of commuters, and builds cycling and wellness culture.
- e) Campbell River and Courtenay Riverway are both great projects to hold up as examples to celebrate and rally around. They enhance the experiences of both residents and visitors.
- f) Third party community partners for a Comox Multi-Use Path could help build broad based community and political support.

- g) Climate change, flooding, storm surges and rising sea levels should be considered in terms of mitigation as well as location and infrastructure choices.

## Opportunities and Constraints

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Per the results of the technical workshops, points of interest and opportunities emerged are outlined as follows:

- a) Flexibility regarding municipal standards visible within Courtenay and Comox areas
- b) Recognition of the KFN territory and commercial draws for parks, businesses and other sites
- c) Respect and protection of Estuary and Heritage Values (Ecology/History of Area)

The constraints pointed out during the workshops were:

- a) Rising sea level that may result in flooding on estuary side
- b) Topography of the road – width, slope, landscape and tie-ins at either end
- c) Archaeological value of the waterside

While a full SWOT analysis was not included in the workshops, the above constraints have been inserted into the previously completed SWOT where relevant. This is included at *Appendix D* and can be referenced during future stages of this project.

## Proposed Concept Design

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Two typical cross-sections are proposed for the corridor from 17 Street to the Town of Comox:

- a. Buffered Cycle Track
- b. Bike Lanes.

The technical working groups identified both a commuter lane and a separate recreation multi use corridor as priorities. Please see *Appendix E* for the proposed typical Comox Road cross section.

The “Buffered Cycle Track” provides commuter cyclists with a bike lane in each direction of travel, which is buffered from the road travel lanes for enhanced safety and ease. This option also has a separate optional recreational trail on the estuary side, which is a multi-use facility for all modes of active transportation. The “Bike Lanes” option shows bike lanes adjacent the roadway travel lanes, also with an optional recreation trail along the estuary.

During future planning and design phases of the project, and subject to further consultation with KFN, these cross-section options can be used as a starting point for the Comox Road design. The preferable option to implement where possible is the Buffered Cycle Track & Trail. If this is not feasible due to insufficient right-of-way width or an existing feature to be preserved, the Bike Lanes & Trail option would be the next best option to implement.

The above options could also be phased in implementation along the corridor dependent on the availability of funding to the various governments involved. For instance, the portions in CVRD Area “B” could be implemented first, and as bike lanes only. This would allow for a lower cost initial investment which could be expanded in the future as funding allows.

Constraints such as right-of-way widths, natural features and access locations, vary along the corridor. Therefore, the cross-section used along Comox Road could vary along the corridor between both options dependent on the constraints at the various locations. Optimal transition points would be identified in the future planning and design phases of the project, once detailed-level data is compiled along the corridor.

### Cost Estimates

Below is a table showing the rate per lineal meter basis for each cross section. This accounts for the painting of lane lines and pavement to be added to the existing roadway.

DESCRIPTION	RATE
<b>Cross-section 1: Cycle Track w/ Recreation Trail</b>	
<sup>1</sup> Pavement – ~8.0m of pavement + 3.0m ditch	\$915/m
Painting – 5 lane lines	\$40/m
<b>TOTAL (Cross-section 1)</b>	<b>\$955/m</b>
<b>Cross-section 2: Bike Lanes w/ Recreation Trail</b>	
<sup>1</sup> Pavement – ~6.0m + 3.0m ditch	\$690/m
Painting – 3 lane lines	\$24/m
<b>TOTAL (Cross-section 2)</b>	<b>\$714/m</b>
<b>Cross-section 3: Bike Lanes w/o Recreation Trail</b>	
<sup>1</sup> Pavement – ~3.0m + 3.0m ditch	\$360/m
Painting – 3 lane lines	\$24/m
<b>TOTAL (Cross-section 3)</b>	<b>\$384/m</b>
<b>Cross-section 4: Narrow Bike Lanes</b>	
Pavement (minimal widening) – per meter of pavement	\$110/m
Painting – 3 lane lines	\$24/m
<b>TOTAL (Cross-section 4)</b>	<b>\$134/m</b>

The table below shows the cost estimate total with the total length currently proposed for each cross section.

CROSS-SECTION	RATE	LENGTH	COST
Cycle Track w/ Recreation Trail	\$955/m	~1230m	\$1,174,650
Bike Lanes w/ Recreation Trail	\$714/m	~996m	\$711,144
Bike Lanes w/o Recreation Trail	\$384/m	~496m	\$190,464
Narrow Bike Lanes	\$134/m	~414m	\$55,476
<b>GRAND TOTAL</b>			<b>\$2,131,734</b>
ENGINEERING (20%)			\$426,347
<sup>2</sup> CONTINGENCY (30%)			\$639,520
<b>TOTAL</b>			<b>\$3,197,601</b>

#### Assumptions:

Pavement to be added does not include the existing shoulder of approximately 2.5m (~1.25m each side) along the road. <sup>1</sup>Rate includes subgrade preparation, excavation, granular base and subbase, and Hot Mix Asphalt for the pavement to be added and hydro-seeding for the proposed ditch. <sup>2</sup>Contingency (at least 30%) includes traffic control, clearing and grubbing, and mobilization and demobilization.



## Closure

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It is recommended that this project proceed to further project implementation planning and that the results of these workshops be presented to the Town, City, KFN, CVRD, and ITRSC.

Next steps should include the following:

- Detailed topographic survey
- Assembly of accurate base plan and confirmation of all constraints along the corridor
- Detailed preliminary design and more accurate cost estimates
- Further exploration of implementation and phasing options
- Detailed design of preferred option

Yours truly,  
Wedler Engineering LLP

Per:



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Partner • Project Engineer  
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Courtenay, BC V9N 3N6  
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Appendices:

Appendix A – Start-Up Meeting Minutes  
Appendix B – Technical Workshop 1 package  
Appendix C – Technical Workshop 2 package  
Appendix D – Update SWOT analysis  
Appendix E – Typical Comox Road Cross Sections

APPENDIX A – Start-Up Meeting Minutes  
May 23, 2017







May 23, 2017

**Comox Valley Regional District**

**START UP MEETING MINUTES**

**PROJECT:** Comox Road Multi-Use Path Technical Workshops

**VENUE:** CVRD – Committee Room

**DATE and TIME:** Thursday, May 4, 2017 at 2:30 PM

1. Introductions

1.1 Attendance list

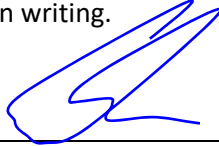
Name	Org.	Contact	Name	Org.	Contact
Vince Van Tongeren	CVRD	vvantongeren@comoxvalleyrd.ca	Mark Harrison	CVRD	mharrison@comoxvalleyrd.ca
Michael Zbarsky	CVRD	mzbarsky@comoxvalleyrd.ca	Andrew Gower	Wedler Engineering	agower@wedler.com
Doug DeMarzo	CVRD	ddemarzo@comoxvalleyrd.ca	Meaghan Cursons	Meaghan Cursons SP	meaghancursons@gmail.com

Item		Action By:
<b>2.</b>	<b>Goal of Technical Workshop Process</b>	
2.1	Ensure staff from all jurisdictions involved in the project (Courtenay, Comox, KFN, MOTI, CVRD) are committed to the project and will “champion” it within their respective municipalities / organizations. Furthermore, the end goal is to be able to have information needed to prepare grant funding requests.	Info
<b>3.</b>	<b>Scope Review</b>	
3.1	<p>Major project elements confirmed as follows:</p> <ol style="list-style-type: none"> <li>1. Workshop #1 – begin with info / case studies relating to traffic theory / congestion as it pertains to modal shifts from cars to bikes / transit / pedestrians. Goals as follows: <ol style="list-style-type: none"> <li>a. What will be the goal of the infrastructure to be built? Recreational or commuter route.</li> <li>b. Assign homework to municipal staff attending – send the team OCP / strategy statements that support the proposed infrastructure. Also, provide details on projects along the route that could impact or potentially assist with the trail / path.</li> </ol> </li> <li>2. Workshop #2 – Specific background info for the section of Comox Road to be looked at. Goals of the workshop: <ol style="list-style-type: none"> <li>a. Determine the proposed cross-section / detail for the path / trail.</li> <li>b. Have staff from each organization / municipality return and gain approval for the project through their respective councils / organizations.</li> </ol> </li> <li>3. Presentations to Councils / Committees: <ol style="list-style-type: none"> <li>a. Town of Comox, City of Courtenay, CVRD, KFN, MOTI</li> </ol> </li> </ol> <p>Note – any design proposals must meet TAC standards.</p>	Wedler

<b>4.</b>	<b>Stake-Holders</b>	
4.1	Stake-holder groups for the project were reviewed: <ul style="list-style-type: none"><li>- Workshop attendees will be technical staff from the municipalities and organizations who have jurisdiction (Courtenay, Comox, KFN, MOTI, CVRD)</li><li>- IRSTC includes Edwin Grieve (CVRD), David Frisch (City), Barbara Price (Town), Shelia MacDonnell (SD71), Angela Holmes, Emily Watts, Sue Vince, a KFN Rep and a MOTI Rep.</li></ul>	Wedler
<b>5.</b>	<b>Action Items</b>	
5.1	Invite workshop participants	CVRD
5.2	Schedule workshops / book meeting space	CVRD
5.3	Prepare workshop materials / agendas	Wedler
5.4	Provide proposal for drone video of Comox Road	Wedler

These are the writers' interpretation of the events discussed during this meeting and shall be deemed correct unless otherwise notified in writing.

Signed by:



Andrew Gower, FEC, P.Eng.

- Appendix B – Comox Road Multi-Use Path Technical  
Workshop No. 1  
June 13, 2017
- a) Agenda
  - b) Slide Show Presentation
  - c) Session 1 Summary Notes



June 13, 2017

File Ref: V17-0287/A

**Comox Valley Regional District**

**TECHNICAL WORKSHOP #1**

**PROJECT:** Comox-Road – Multi-Use Path Options

**VENUE:** CVRD Board Room

**DATE and TIME:** Tuesday, June 13, 2017 at 9:30 AM

Item		Action By:
<b>1.</b>	<b>Introductions</b>	
1.1	Round-table	All
<b>2.</b>	<b>Background Information Presentation - Traffic and Congestion</b>	
2.1	<ol style="list-style-type: none"><li>1. Background on Comox Road Project – workshops planned</li><li>2. TED Talk – “nudges” and the impact on traffic.</li><li>3. Fundamental Diagram of Traffic Flow.</li><li>4. Safety and traffic flow issues – bike traffic in shoulders.</li><li>5. Cost – construction versus maintenance</li><li>6. Health benefits of active transportation.</li></ol>	Andrew
<b>3.</b>	<b>Facilitated Discussion</b>	
3.1	Goal of the project - discussion Brainstorm re: tensions and opportunities related to each of these options <ol style="list-style-type: none"><li>a. community corridor?</li><li>b. recreation corridor?</li><li>c. hybrid/blend of both?</li><li>d. integrated/cooperative 'system' between jurisdictions</li><li>e. Confirm need for a link along Comox Road</li><li>f. Recreational or Commuter link?</li></ol>	Meaghan
3.2	Preliminary inventory of relevant projects/planning documents etc Brainstorm re: projects underway and framework for homework for participants <ol style="list-style-type: none"><li>a. other projects underway</li><li>b. health and wellness strategies</li><li>c. traffic plans</li><li>d. parks and greenways</li><li>e. OCP's</li><li>f. other</li></ol>	Meaghan
<b>4.</b>	<b>Next Workshop</b>	
4.1	June 28, 2017 – 1:30 pm – CVRD Boardroom	All

An aerial photograph of a road intersection. The road has multiple lanes with white and yellow markings, including arrows indicating traffic flow. A red car is visible in the lower-left lane, and a white car is in the upper-left area. The surrounding area includes grass, some debris, and utility poles. The text 'Comox Road – Multi-Use Path Options Workshop #1' is overlaid in white, centered on the image.

# Comox Road – Multi-Use Path Options Workshop #1

# Comox Road – Multi-Use Path Options – Workshop #1

- Introductions
- Background Presentation
- Facilitated Session
- Homework!





# Comox Road Multi-Use Path Project

- Finalize technical workshop scope of work and agenda December 2016
- Present technical workshop scope of work, agenda, and list of attendees to IRTSC. Determine preferred path concept. January 5, 2017
- Host technical workshop June 2017
- Report on results of technical workshop to IRTSC July 2017
- Recommendation from IRTSC to CVRD board on direction of project based on findings of technical workshop (ie. support of project phasing approach), and to proceed with project. Summer-Fall 2017
- Survey & design work (as necessary) Summer-Fall 2017
- Bicycle traffic counts Summer 2017
- Develop cost estimates Summer 2017
- Public consultation Summer 2017
- Permitting for phase 1 of project (ie MOTI, archaeology) Summer-fall 2017
- Estimated opening of 2017 Bike BC funding call October 2017
- Recommendations to appropriate jurisdictions re: proceeding with project and request for local funding (e.g. CWF funding for CVRD electoral area share of project costs) November 2017
- BikeBC grant application November 2017
- Estimated 2017 BikeBC grant application deadline December 15, 2017



# Workshops

- Workshop #1 – Fundamental Information Tool Boxes
  - Determine Intent / Overall goal for the project
- Workshop #2 (June 28, 2017 – 1:30 pm)
  - Specific Design Information
  - Determine Concept Design Solution
- Output – Presentation of Workshop Results



# Nudges....

- [https://www.ted.com/talks/jonas\\_eliasson\\_how\\_to\\_solve\\_traffic\\_jams](https://www.ted.com/talks/jonas_eliasson_how_to_solve_traffic_jams)

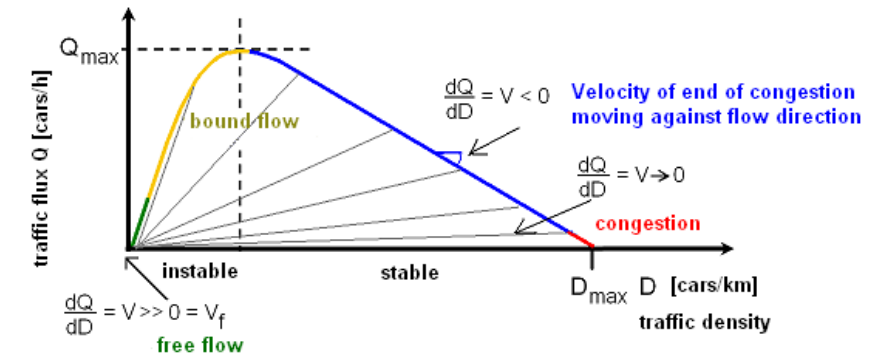
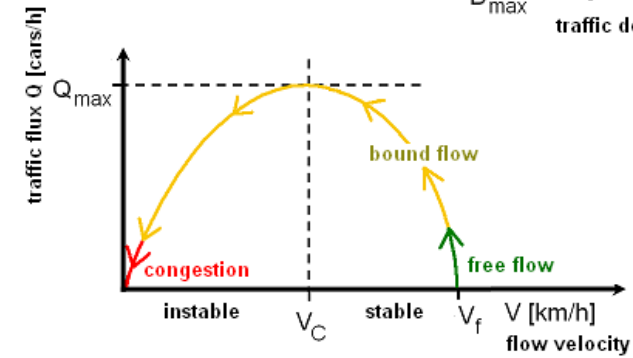
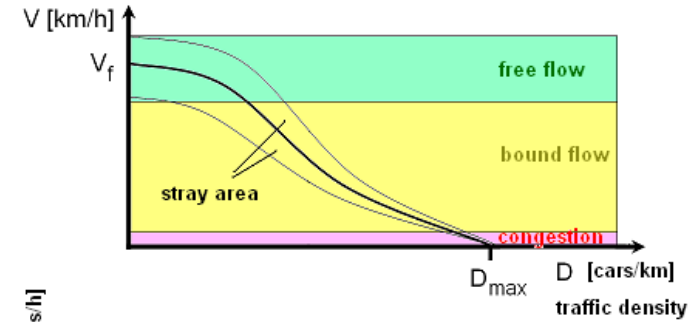
# Traffic / Congestion

## Fundamental diagram of traffic flow

Fundamental equation of traffic flow:

$$Q = D \cdot V$$

Source: Hendrik Ammoser, Fakultät Verkehrswissenschaften, Dresden, Germany



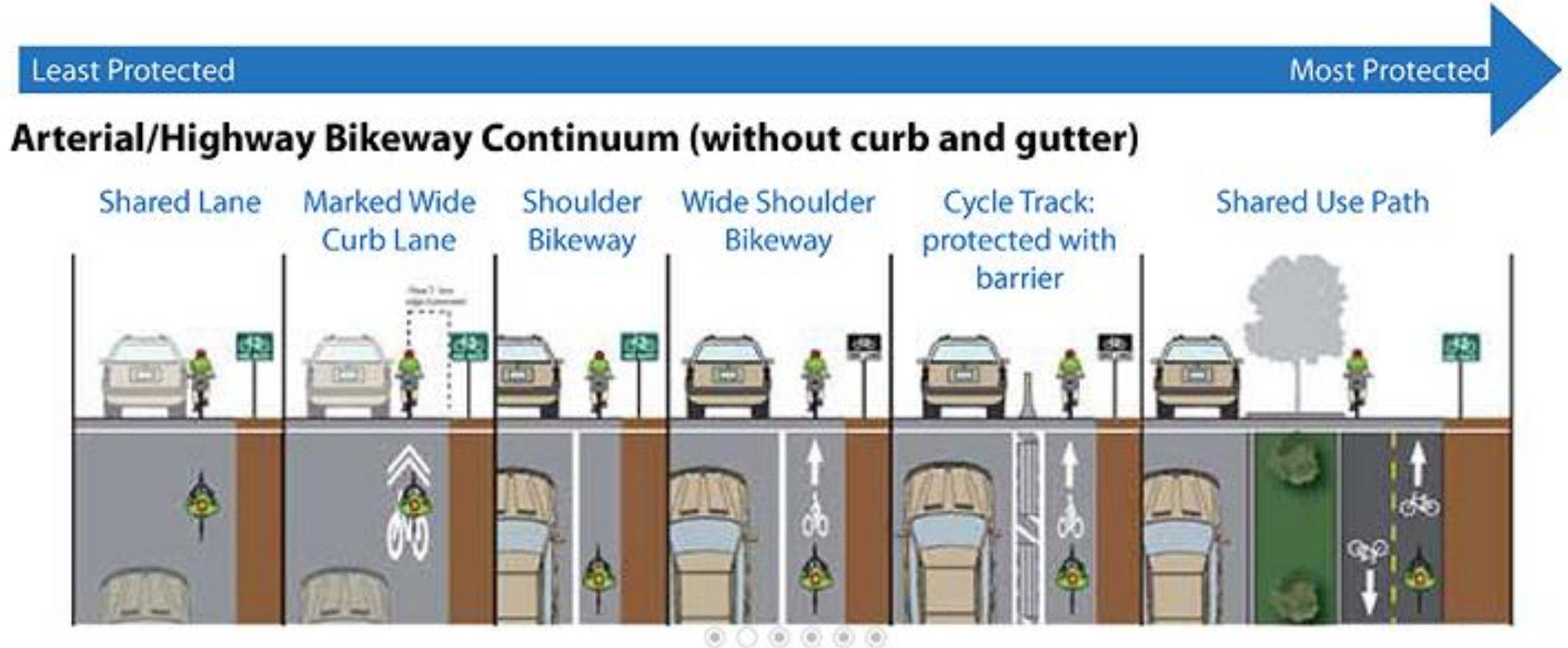
$V_f$  = "free velocity" - maximum velocity on free lane, selectable by the driver depending on car, skill etc.

$V_C$  = "critical velocity" with maximum traffic flux (about 70...100 km/h)

# Traffic Flow



# Traffic Flow



# Costs

- Capital
- *Maintenance*
- *Study from Truro*



# Health Benefits

- Active Transportation?
  - *...creating physical environments that facilitate healthy living is a critical component of supporting individuals in making better choices for their health.*



# Research...

- 69% of Canadian adults and 91% of Canadian children and youth are not getting the recommended levels of daily physical activity.
- One in four Canadian adults are considered obese, along with about one in ten Canadian children and youth between the ages of 6 and 17.
- 2008 economic costs of obesity are conservatively estimated at \$4.6 billion using the eight chronic diseases most consistently linked to obesity. This is up about 19% from 2000.
- Numerous studies and recent research from across Canada have linked the lack of physical activity as a key contributor to Canada's high (and growing) obesity rates.
- It is estimated that if all Canadian ...

What's Next?



## Comox Road Multi-Use Path Technical Workshop

### Session 1 - NOTES

Comox Valley Regional District Board Room

Tuesday June 13th 2017

#### 1. SESSION HOMEWORK:

Participants agreed to bring forward the following information to the next meeting June 28th:

- a) Inventory of Projects (conceptual, proposed or underway) that physically connect into the Comox Road corridor.
- b) Planning Documents (OCP's etc.) with relevant sections and timelines for updates/renewal
- c) K'omoks Estuary Plan and related documents
- d) 3<sup>rd</sup> Party Documents (Fields Site, Biodiversity Corridor, CVLT trails map, ALR documents, CV Cycling Coalition)
- e) Technical standards for each jurisdiction (roads, trails, paths and intersections)

#### 2. EMERGENT THEMES FROM SESSION 1:

- a) Larger shared **vision** for community corridors that involves all jurisdictions and community critical to project success.
- b) Great opportunities exist to integrate this visioning process into community planning documents/renewals.
- c) Recreation and Commuter both areas of focus – recreation focus can provide a pathway for future generations of commuters. Creates the culture.
- d) Campbell River and Courtenay Riverway are both great projects to hold up as examples to celebrate and rally around.
- e) 3<sup>rd</sup> party community partners/leaders could hold key to broad based community and political support.
- f) Climate change, storm surges and rising seas levels should be part of conversation in terms of mitigation as well as location and infrastructure choices.

#### 3. DISCUSSION NOTES:

- a) **Discussion re: perceived need for the project**
  - It is identified in the CVRD 2014 OCP, a component around connections
  - committee is interested in the project
  - (CVRD) Parks sees it as an opportunity for a recreational trail

- Currently not kid/family friendly for cycling, but it works OK as a commuter corridor
- Safety is an issue, discourages use of this route
- High traffic volume on this route and not wide enough to feel safe
- This could solve problems BUT have we identified if it actually feasible?
- Do we want this or do we need this? What do we actually want to achieve?
- (MOTI) not the best for cycling but at the same time not a “pinch point” (the shoulder does exist) which makes it harder to prioritize
- (MOTI) What are we actually wanting to achieve, what is the vision? Is it a showcase? Is it fundable? What is the desired outcome?
- (MOTI) what is our desired outcome, let’s get clarity on that.
- Establishing a vision with local elected government is key
- Riverway very well could have NOT succeeded but it is and now it’s a community gem that no one can imagine NOT being there.
- It starts with a strong vision, that’s the key
- We’re early in the process from a Valley-wide perspective.
- Need to negotiate the focus, commuter or recreation or both?
- We need to reduce driving/traffic, reduce demand for a 3<sup>rd</sup> crossing
- Non-motorized travel helps to achieve greenhouse gas emission reductions
- Need more community gems like the Riverway, makes this community such a great place to live in, and invest in
- Commuter and recreation needs are different, they don’t require the same facility
- We need to address safety issues for smaller kids, families
- We need to address feasibility and opportunity for tie in at either end. Tie in is critical!
- In the long term we need to consider location, climate change, storm surges, rising sea levels
- Is this the right location? Is the Dyke registered? Are there climate change implications in terms of infrastructure investment?

#### **b) Recreation or Commuter Corridor?**

- Separation, delineation, designation would be critical
- Riverway is a lesson, recreation use is the reality, commuter is secondary, seasoned commuters use the roads.
- Focus on developing commuters important, but recreation focus critical for community support
- Commuters are comfortable with traffic risks, but a recreation path provides a pathway to future commuters, cultivates commuters
- The estuary is an incredible recreation and amenity. So beautiful. There is opportunity build on this gift

- Need to look at “who” will use it. Professional bike commuters will still use road.
- c) **What documents/planning processes/projects currently connect to this project? What Strategic documents could provide support or evidence for this initiative and cross jurisdictional collaboration**

- Regional Growth Strategy 4b and 8b
- Parks and Greenways Strategic Plan – CVRD
- City of Courtenay OCP
- 2017 City of Courtenay Parks and Recreation Masterplan process is about to start. External partners will be involved. Part of this process is a gap analysis what could inform this project
- City’s 2017 “Transportation Network Master Plan” under development, external stakeholders will be engaged. Includes the cycling network and a gap analysis for sidewalks
- City’s 2014 multi-modal plan (policy and big picture but not details)
- 2011 Comox Transportation Plan (staff to check in on next update)
- Comox OCP
- MOTI has a bike lane standards document, might be outdated
- BC On the Move Document?
- Most local government now have climate change guiding policy statements. Resilience statements. Where are they?

*OTHER DOCUMENTS/INITIATIVES:*

- KFN/Project watershed/Estuary Plan
- Fields Sawmill Site Plan
- Bio diversity corridors (CV Land Trust and Conservation Partnerships)
- Cycling Corridor Maps (are a piece of the puzzle)
- CVEDS cycle tourism priorities?
- BC Cycling Coalition – Eastern Vancouver Island Cycling Route
- Centennial Trail Project?
- BC Tourism – trail priorities
- Campbell River Project is a great example
- Having a 3<sup>rd</sup> party champion (like Rotary) is a great way to de-politicize this kind of project

- Appendix C – Comox Road Multi-Use Path Technical  
Workshop No. 2  
June 28, 2017
- a) Agenda
  - b) Slide Show Presentation
  - c) Session 1 Summary Notes





June 28, 2017

File Ref: V17-0287/A

**Comox Valley Regional District**

**TECHNICAL WORKSHOP #2**

**PROJECT:** Comox-Road – Multi-Use Path Options

**VENUE:** CVRD Board Room

**DATE and TIME:** Wednesday, June 28, 2017 at 1:30 PM

Item		Action By:
<b>1.</b>	<b>Introductions</b>	
1.1	Round-table	Meaghan
<b>2.</b>	<b>Background Information Presentation – Bike Lane / Path Standards and options</b>	
2.1	<ol style="list-style-type: none"><li>1. Review outcomes of Workshop #1 – emergent themes</li><li>2. Review of overall project plan / schedule</li><li>3. Review the corridor – crossings, intersections, physical constraints (video).</li><li>4. Review current bike lane and path standards</li><li>5. Review recent BC projects – Victoria and Vancouver</li><li>6. Review projects that could impact the trail / path / lane</li></ol>	Meaghan Andrew Andrew Andrew Andrew All
<b>3.</b>	<b>Facilitated Discussion</b>	
3.1	Goal of the project - discussion Brainstorm re: concept level design solutions (use 3 x prints of corridor for sketches) <ol style="list-style-type: none"><li>a. Cross sections</li><li>b. Connections to existing infrastructure at each end of the corridor</li><li>c. Next steps</li></ol>	Meaghan
3.2	Homework for participants – integrate this project with other projects at your municipality <ol style="list-style-type: none"><li>a. Staff support</li><li>b. Grant and plan inclusion</li><li>c. Provide “questions to answer” for Andrew’s presentations to each council</li></ol>	Meaghan
<b>4.</b>	<b>Presentations to Councils / Committees</b>	
4.1	September?	All

Bicycle User Types	Percentage
Strong & Fearless	Very Low Percentage
Enthusied & Confident	5-10% of population
Interested but Concerned	approx. 60% of population
No Way, No How	approx. 30% of population

Very high percentage of the general population that is untapped for mode shift to other modes of transportation, even though they are interested.

(Source: Draft AASHTO Guide for the Development of Bicycle Facilities)

**TABLE 1—Better Bicycle Infrastructure, Improved Cyclist Safety, and Increased Cycling**

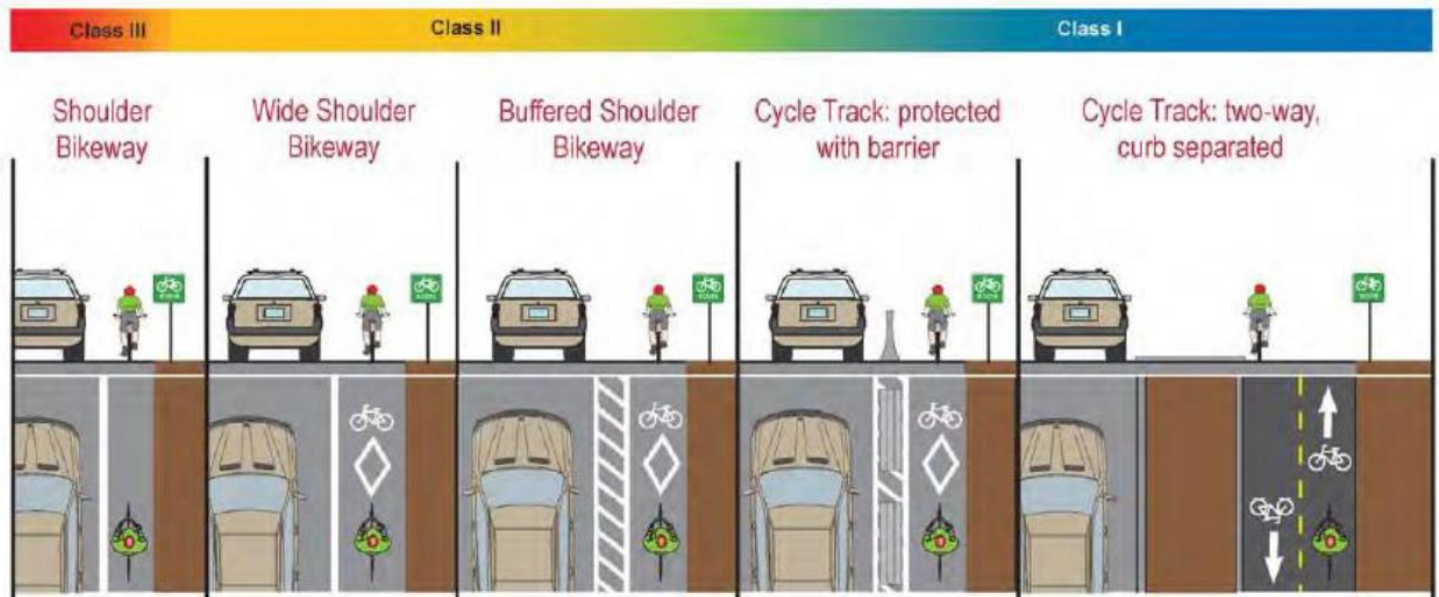
City	Years	Growth in Bikeway Network, <sup>a</sup> %	Growth in Bicycle Trips, %	Change in Crashes per 100 000 Trips, %	Change in Fatalities and Severe Injuries per 100 000 Trips,%
Portland, OR	2000–2015	53	391	-62	-72
Washington, DC	2000–2015	101	384	-46	-50
New York, NY	2000–2015	381	207	NA	-72
Minneapolis, MN	2000–2015	113	203	-75	-79
San Francisco, CA	2000–2015	172	167	-36	NA
Cambridge, MA	2000–2015	27	134	-57	NA
Chicago, IL	2005–2015	135	167	-54	-60
Seattle, WA	2005–2015	236	123	-25	-53
Los Angeles, CA	2005–2015	130	114	NA	-43
Philadelphia, PA	2008–2015	17	51	NA	-49

*© Bueler and Pucher*

Source: Research by John Pucher and Ralph Bueler, compiled in articles on treehugger.com, visual posted on <https://www.treehugger.com/bikes/new-american-study-confirms-physically-separated-bike-lanes-are-crucial-safety.html>

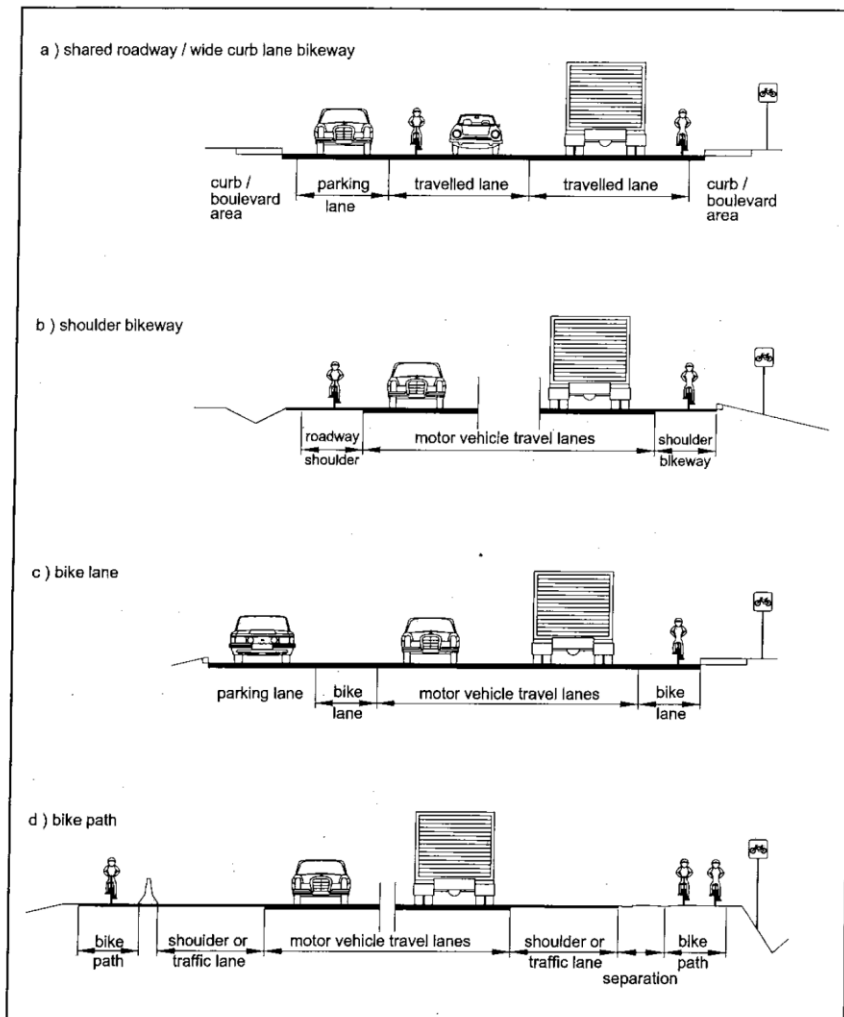


## Bikeway Classifications



Source: CVRD Staff Report – Comox Road Path Project – Bike BC considerations (November 23, 2016)

Figure 3.4.3.1 Bikeway Classification



Source: TAC Geometric Design Guide (1999)

**Sample of Design Guidelines Used for Cycling Facilities**

Document	Dedicated Bike Lane Width (Exclusive)	Exclusive Bicycle Lane/Cycle Track (Exclusive, Buffered or Barrier)		Separated Trail Width (Shared with Pedestrians)	
	Uni-directional	Bi-directional	Uni-directional	Bi-directional	Uni-directional
TAC Geometric Design Guide (Section 3.4) (1999) - New Bikeway guidelines under development	<b>2.5 m</b> Desirable (2.0 m min.)	<b>3.5 m</b> Desirable (2.5 m min.)	<b>2.0 m</b> Desirable (1.5 m min.)	<b>4.0 m</b> Desirable (3.0 m min.)	<b>3.0 m</b> Desirable (2.0 m min.)
Urban Supplement to the TAC Design Guide (Pages UM17 & UM18)	<b>2.0 m</b> Desirable (1.5 m min.)	<b>3.5 m</b> Desirable (2.5 m min.)	<b>2.0 m</b> Desirable (1.5 m min.)	<b>4.0 m</b> Desirable (3.0 m min.)	<b>3.0 m</b> Desirable (2.0 m min.)
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City of Vancouver Transportation Design Guidelines (2017) - All Ages and Abilities Cycling Routes		<b>3.0 m</b> Minimum	<b>2.5 m</b> Minimum		
City of Nanaimo Draft Trail Plan: Design Guidelines				<b>3.0 m</b> Minimum	
City of Victoria #biketoria initiative	<b>2 m</b> approx.	<b>3.5 m</b> desirable (2.7 m min.)			
Capital Regional District Bicycle and Pedestrian Design Guidelines	<b>up to 2.5 m</b> (1.5 m min.)	<b>3.5 m</b> Minimum	<b>2.5 m</b> Minimum	<b>4.0 m</b> Desirable (3.0 m min.) + min. 0.6 m shoulders	Regional (cross-jurisdictional): 4 to 6 m + 1 m shoulders Community: 3 to 5 m + 1 shoulders

# All Ages and Abilities Cycling Routes



Version 1.1  
March, 2017

**Overview:**

The City of Vancouver has a vision to make cycling safe, convenient, comfortable and fun for all ages and abilities (AAA), including families with children, seniors, and new riders. An inviting and connected network of low stress "AAA" routes will provide a wide spectrum of the population the option to cycle for most short trips.

This guideline provides 10 "general rules" to consider when designing or designating a route "AAA". It is intended as a living document that will be updated and supplemented periodically as we learn from local projects, research, and other leading cities.

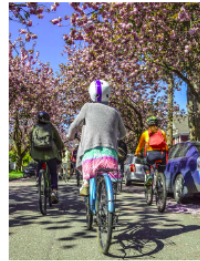


Image: Chris and Melissa Brunlett

**Rule #1:**

Build the types of cycling facilities that feel comfortable for all



Major Street Shared Use Lane | Painted Bicycle Lane | Paint Buffered Bike Lane | Local Street Bikeway | Protected Bike Lane | Off-Street Pathway

Unsuitable for AAA facility

Suitable for AAA facility

**Rule #9:**

Keep grades below 3% as much as possible

**Rule #10:**

Design intersections thoughtfully to reduce conflicts, increase visibility and provide clear direction of movement

VANCOUVER IS TARGETING AT LEAST HALF OF ALL TRIPS TO BE MADE ON FOOT, BIKE OR TRANSIT BY 2020; WITH 2/3 OF ALL TRIPS BY 2040.

City of Vancouver Transportation 2040 (2012)

**Rule #2:**

Target motor vehicle volume below 500/day (below 50/peak hour)

Local Street Bikeway

**Rule #3:**

Target motor vehicle speed below 30km/hr median (below 40km/hr 95th percentile)

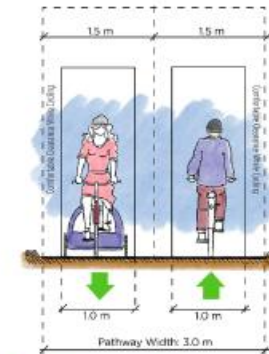
**Rule #5:**

Design bike lane width for comfortable passing:

- 2.5m (8ft) unidirectional
- 3.0m (10ft) bidirectional

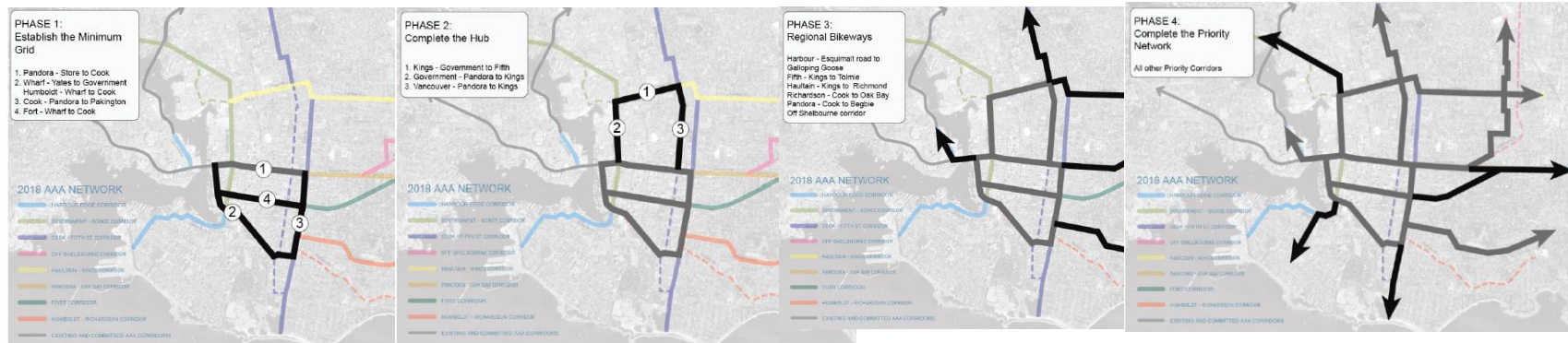
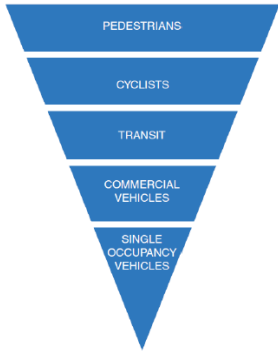


Preferred minimum 2.5m unidirectional path  
Provides some clearance for passing and conversational cycling

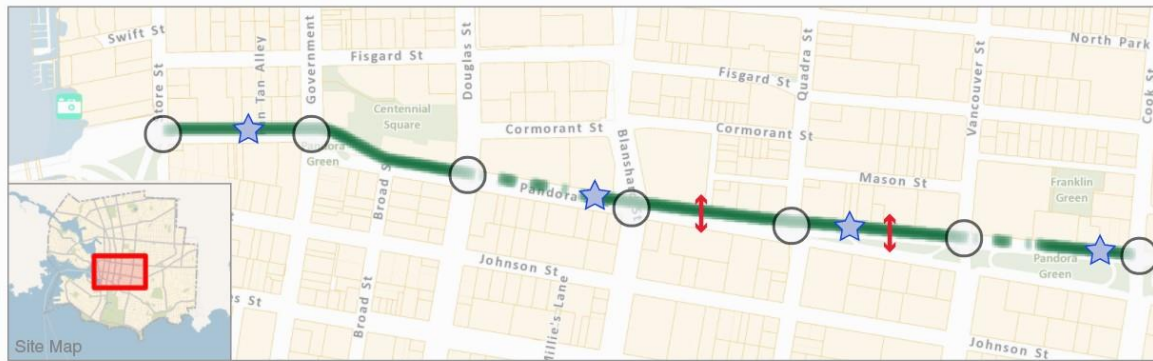


Preferred minimum 3.0m bidirectional path  
Provides comfortable clearance for passing oncoming cyclist

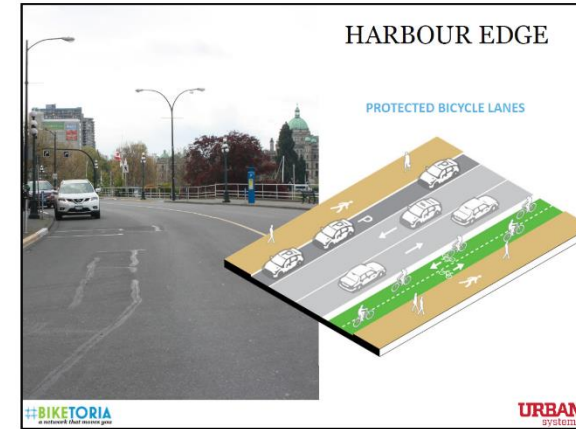
Official Community Plan Hierarchy



The Pandora Avenue protected bike lanes are the first bike lanes to be physically separated from motor vehicle traffic in Victoria. NOW OPEN! (\$890,492 from Bike BC)



- New two-way protected bike lane
- Temporary two-way protected bike lane to be completed after development construction
- New bicycle traffic signals and intersection signal phasing
- New bus stop
- New mid-block crosswalk



Source: Urban Systems presentation to City Committee of the Whole, April 28, 2016

Pictures: City of Victoria webpage – Pandora Ave Cycling <http://www.victoria.ca/EN/main/residents/transportation/cycling/biketoria-pandora-ave.html>

# Continuum of Bikeway Facilities on Arterials without Curb & Gutter

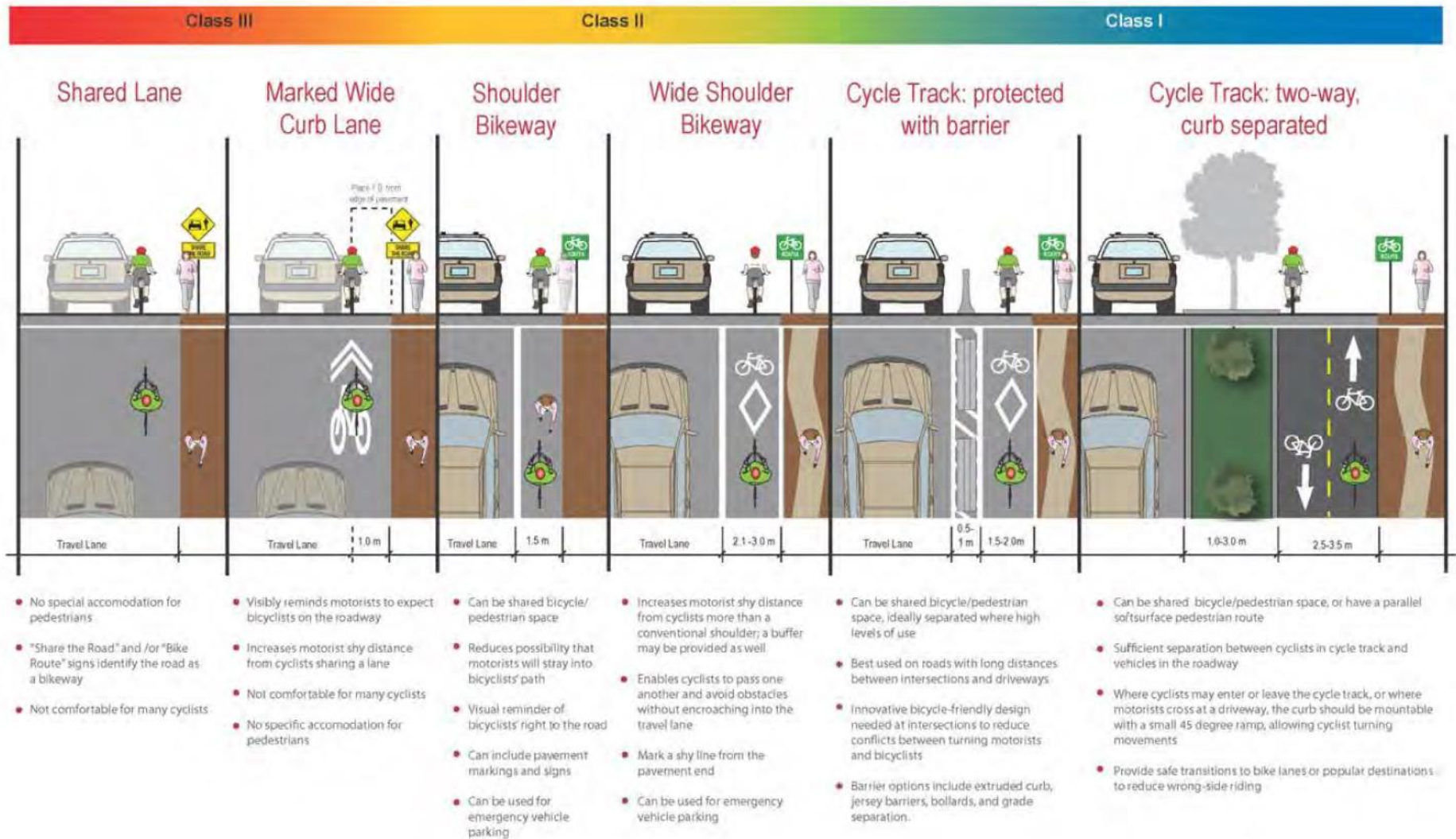


Figure 4. Continuum of Bikeway Facilities on Arterials without Curb & Gutter

# City of Nanaimo Multi-Use Paths

Source: Draft Trail Implementation Plan

## Park Satisfaction – How satisfied are you with the following park amenities?

Facility/Service	Rank	Satisfied	Neutral	Dissatisfied
<b>Trails</b>	<b>1</b>	<b>70%</b>	<b>30%</b>	<b>10%</b>
Waterfront	2	67%	21%	12%
Natural/passive	3	60%	30%	10%
Sports fields	3	60%	30%	10%
Neighbourhood parks	4	54%	27%	20%
Sport courts	5	48%	36%	16%
Environmentally sensitive	5	48%	34%	18%
Playgrounds/water parks	5	48%	34%	18%
Off-leash areas for dogs	6	40%	33%	27%
Art in public places	7	35%	42%	23%

(Public survey results from the Nanaimo Parks, Recreation & Culture Master Plan completed in 2004)

## Need for Additional Facilities - What additional park facilities do you feel are needed?

Facility	Percent
Waterfront parks	43%
<b>Trails/pathways</b>	<b>39%</b>
Arenas	33%
Environmentally sensitive	29%
Natural/passive	26%
Off-leash dog	23%
Neighbourhood parks	22%
Playgrounds/water	16%
Sport courts	16%
Swimming pools	16%
Art in public places	16%
Community centres	16%
Miscellaneous	14%

(Public survey results from the Nanaimo Parks, Recreation & Culture Master Plan completed in 2004)



Pipers Lagoon Trail



Urban hard surface trails like the Harbourfront Walkway allow trail access for diverse users.



Third Street Park Trail



Walley Creek (and similar multi-use trails near ESAs) could employ alternative surfacing.

## Trail Concept:

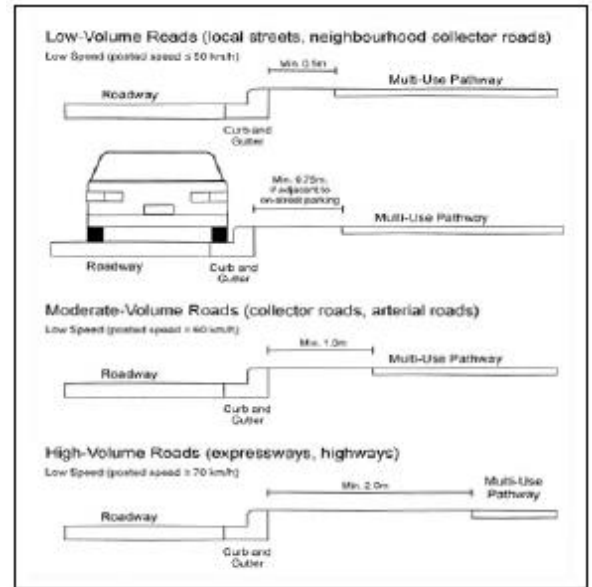
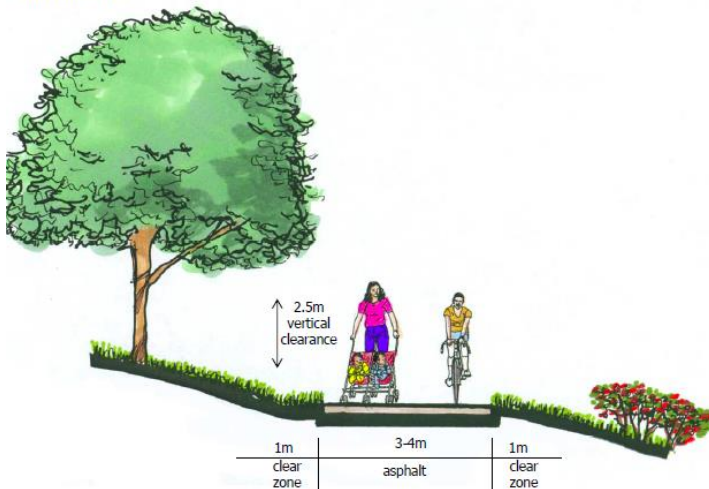


Figure 2.15 from the Bicycle Facility Design Guidelines details suggested pathway clearance from roadways.

An aerial photograph of a road intersection. The road is paved and has white lane markings, including arrows pointing in different directions. A red car is visible on the road. The surrounding area includes some greenery and a concrete curb. The text is overlaid in white, sans-serif font.

# Comox Road – Multi-Use Path Options Workshop #2

# Comox Road – Multi-Use Path Options – Workshop #2

- Introductions
- Background Presentation
- Facilitated Session
- Homework!





# Review Workshop #1 - Themes



# Comox Road Multi-Use Path Project

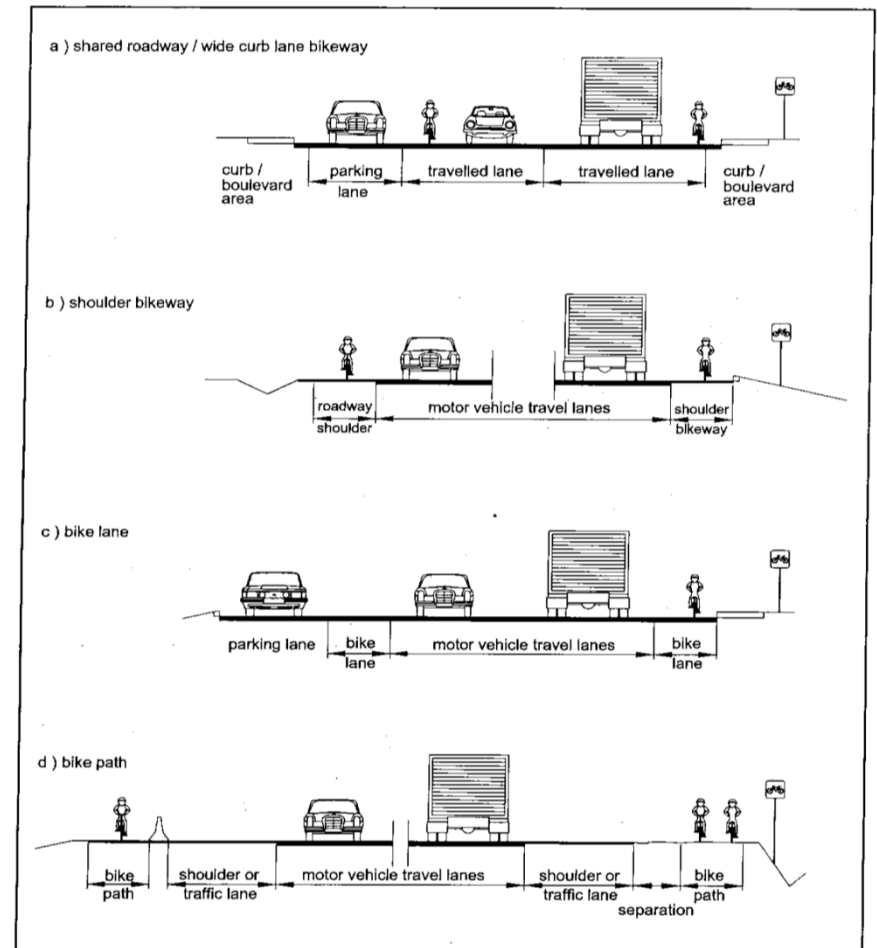
- Finalize technical workshop scope of work and agenda December 2016
- Present technical workshop scope of work, agenda, and list of attendees to IRTSC. Determine preferred path concept. January 5, 2017
- Host technical workshop June 2017
- Report on results of technical workshop to IRTSC July 2017
- Recommendation from IRTSC to CVRD board on direction of project based on findings of technical workshop (ie. support of project phasing approach), and to proceed with project. Summer-Fall 2017
- Survey & design work (as necessary) Summer-Fall 2017
- Bicycle traffic counts Summer 2017
- Develop cost estimates Summer 2017
- Public consultation Summer 2017
- Permitting for phase 1 of project (ie MOTI, archaeology) Summer-fall 2017
- Estimated opening of 2017 Bike BC funding call October 2017
- Recommendations to appropriate jurisdictions re: proceeding with project and request for local funding (e.g. CWF funding for CVRD electoral area share of project costs) November 2017
- BikeBC grant application November 2017
- Estimated 2017 BikeBC grant application deadline December 15, 2017



# Current Standards - TAC

- New standard in development

Figure 3.4.3.1 Bikeway Classification



# Current Standards - Vancouver

- AAA – all ages and abilities
- 9 Rules



# Current Standards - Victoria

- OCP Hierarchy



# Current Standards - CRD



## Continuum of Bikeway Facilities on Arterials without Curb & Gutter

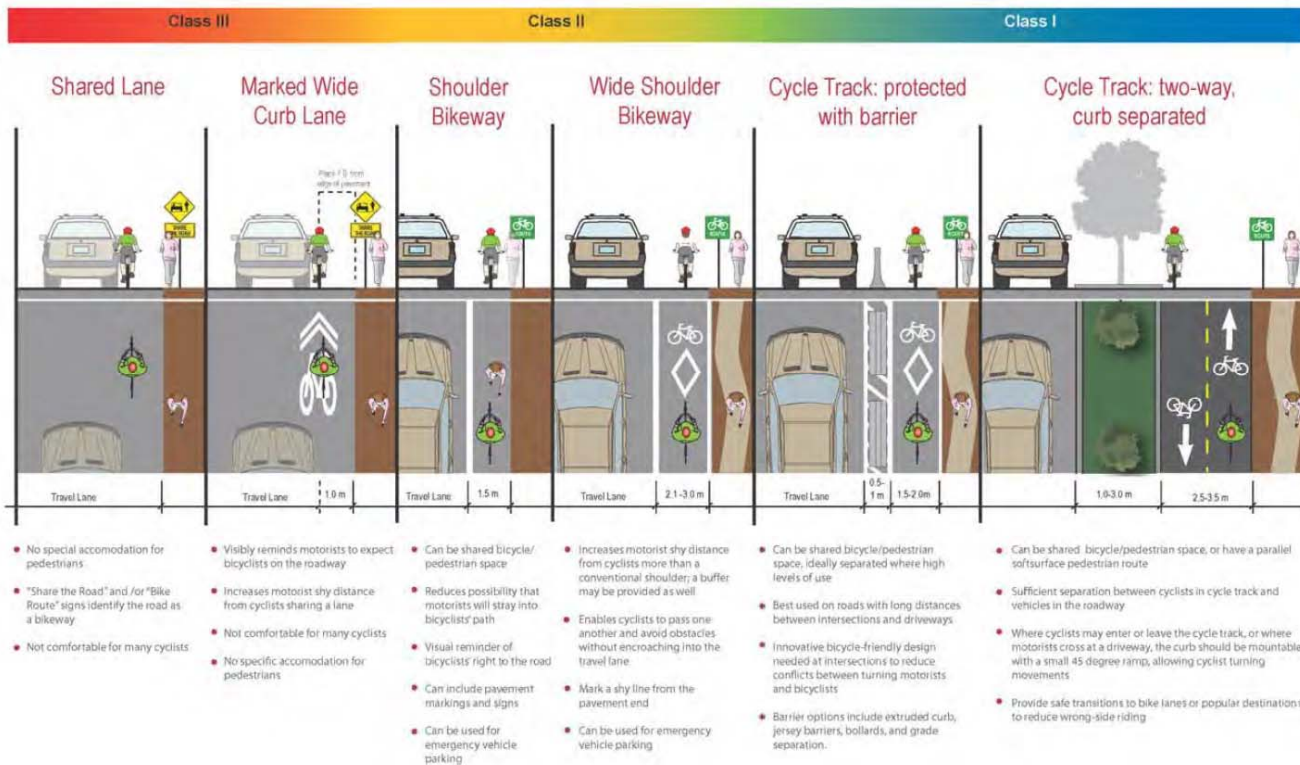


Figure 4. Continuum of Bikeway Facilities on Arterials without Curb & Gutter

# Projects...

- Courtenay?
- Comox?
- CVRD/MOTI?





Document	Dedicated Bike Lane Width (Exclusive)	Exclusive Bicycle Lane/Cycle Track (Exclusive, Buffered or Barrier)		Separated Trail Width (Shared with Pedestrians)	
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				Regional (cross-jurisdictional): 4 to 6 m + 1	
				Community: 3 to 5 m + 1 shoulders	

# Brainstorming



## **Comox Road Multi-Use Path Technical Workshop**

### **Session 2 - NOTES**

**Comox Valley Regional District Board Room**

**Tuesday June 28th 2017**

#### **1. Cross Section**

##### GROUP A

- Project requires separate/both commuter trail and recreation trail
- Recreation trail waterside, 2 directional, separated/buffered
- Commuter trails 1 way, both sides, standard

##### GROUP B

- The challenge is road width
- Is the dream of a 2-way waterside trail physically realistic? (survey to answer this)
- Realistic proposal is commuter path, one way, both sides, combination barrier and separation

#### **2. Constraints**

##### GROUP A

- Intersections in general
- Flooding on estuary side, makes that side a problem for path
- Comox Hill (both sides an issue re: slope)
- Side slopes on 17<sup>th</sup> street (one side)
- Tie-ins at 17th street – how to do this? Dutch intersection?
- How do cyclists transition from multi use to standard route?

##### GROUP B

- Feedback from KFN representative:
  - council does not currently see benefit of this project to KFN.
  - Concerned re: inadequate information and consultation in general
  - likely to prefer N side/dry side
  - Waterside has high archeological value
  - KFN concerned about overuse of beach/estuary dogs
- Landscaping on Comox end, tide-gates, driveways, 17<sup>th</sup> street

#### **3. Points of Interest/Opportunities**

##### GROUP A

- CVRD Parks
- City Park at pump station
- Businesses, Fields Site, KFN
- Estuary Itself/Ecology of area/History of area

#### GROUP B

- Courtenay and Comox areas have lots of flexibility re: municipal standards
- Commercial draws exist for KFN (IHOS etc) and others
- Canoe Launch area is very important (across from Band Office)
- Farm View Road (possible alternate route?)
- Interpretive and Informational signage, recognition of KFN territory, respect and protection of Estuary and Heritage Values
- K'omoks First Nation participation/consultation is critical to relationships and success.

#### 4. Questions to be Answered

- Opportunities for 1<sup>st</sup> option for waterfront services to Local Government? Possible?
- How much more road can we add, and “push the paint”, How much can we shift edge?
- What are the signage restrictions from MOTI perspective?
- What is the actual width available to develop?
- Flooding concerns?
- What are the actual boundaries for the ALR and Ducks Unlimited?
- Nudge lines, infrastructure data and \$ arguments (asset management benefits)

#### 5. Other Discussion Points re: Multi Use Trail

- IRTSC has a strong interest in a recreation trail here. Political will exists.
- Consultation with and participation by KFN critical to project.
- High interest in seeing community have opportunity to engage with the environment.
- KFN has the backroad path to encourage walking, long term plan is to connect it down to the band office across from the canoe launch.
- Would KFN have an interest in developing a part of the trail?
- Questions/Comments about pedestrian use:
  - It's a long walk for pedestrian use
  - There is a lack of concentrated population/residential development
  - Parking areas, bus routes and stops?
  - Is this a viable use or is it recreation cycling? Do we have the right mix for it to be both?
  - Could the pedestrian portion just go past City park/pump house and loop back around to the River Walk way? Connect across river or estuary?
  - Little bits of linkage might make more sense for pedestrians, areas with a focus on eco-education at Fields site, Pump house area? KFN area?

Appendix D – Updated SWOT Analysis



## Comox Road (Dyke Road) active transportation proposal

### SWOT analysis

The following summarized the strengths, weaknesses, opportunities and threats or challenges for a proposed Comox Road multi-use path project. This path project is envisioned to be constructed within the Comox Road dedication which lies within the jurisdictional boundaries of the Ministry of Transportation and Infrastructure (MoTI), the City of Courtenay and the Town of Comox. Comox Road also passes through the K'ómoks First Nation (KFN).

#### Strengths:

- Comox Road is a significant existing direct transportation link between
  - Comox and Courtenay
  - K'ómoks First Nation and the adjacent communities of Comox and Courtenay
- Provides an additional transportation choice for Comox Valley residents and visitors, both for commuters and recreational users
- Promotes modal transportation shift away from single occupancy vehicles towards active transportation
- Comox Road is currently used by dedicated active transportation commuters
  - Builds upon existing usage patterns
- Increases pedestrian and cyclist safety compared to existing conditions
- Comox Road is listed as a priority roadside greenway project for the region
- As Comox Road is only a two lane road, there should be enough space within the road dedication for pathway construction
- It is identified in the CVRD 2014 OCP, a component around connections
- IRTSC is interested in the project
- (CVRD) Parks sees it as an opportunity for a recreational trail
- Improved safety would encourage use of this route
- Widening the bike lane would make the route feel safer due to the current high traffic volume
- We're early in the process from a Valley-wide perspective.
- We need to reduce driving/traffic, reduce demand for a 3rd crossing
- Non-motorized travel helps to achieve greenhouse gas emission reductions
- Need more community gems like the Riverway, makes this community such a great place to live in, and invest in
- We need to address safety issues for smaller kids, families

#### Weaknesses:

- Limited width within MoTI road dedication
  - May be inhibited by current location of the roadway within the road dedication
  - Comox Road lane widths are currently below MOTI standards in some areas
- Difficult to explore path options outside of the road dedication if additional space is desired
  - Private property

- KFN
- ALR
- Estuary
- Some challenging terrain for path construction outside of the current road footprint (within road dedication). May require costly engineering solutions.
  - Ecologically sensitive estuary on the water side
  - ALR lands on the east side of Dyke road
  - Comox hill
  - Flood relief infrastructure crossing under Comox Road
- Comox Road is a busy road with volumes of 15,000+ vehicles a day
- Vehicular traffic on Comox Road tends to travel at speeds beyond the posted 50km/h
- Comox Road is located on a dyke and adjacent to an ecologically sensitive landscape
- Steep grade on Comox hill
- Proximity of private properties to the travelled lane of Comox Road
- Flood relief infrastructure under Comox Road from the estuary into the adjacent ALR lands
- Road crossings may be difficult given the travel speeds and traffic volume
  - Results in challenging access to estuary and regional parks
- Linkages to existing communities may be difficult
  - Comox – hill and existing sidewalk and cycling infrastructure
    - Previous sidewalk located near glacier view road was removed due to safety concerns
  - Courtenay – 17<sup>th</sup> street bridge intersection and bridge deck
- Intersections in general
- Flooding on estuary side, makes that side a problem for path
- Comox Hill (both sides an issue re: slope)
- Side slopes on 17<sup>th</sup> street (one side)
- Tie-ins at 17th street – how to do this? Dutch intersection?
- How do cyclists transition from multi use to standard route?
- Feedback from KFN representative:
  - council does not currently see benefit of this project to KFN.
  - Concerned re: inadequate information and consultation in general
  - likely to prefer N side/dry side
  - Waterside has high archeological value
  - KFN concerned about overuse of beach/estuary
- Landscaping on Comox end, tide-gates, driveways, 17<sup>th</sup> street

### Opportunities:

- Ability to create a seamless active transportation connection between
  - Downtown cores of Comox and Courtenay
  - K'ómoks First Nation to Comox and Courtenay (currently isolated)
- Ability to connect to existing active transportation infrastructure
  - Courtenay Riverway trail

- Sidewalks and bicycle lanes along Comox Road in Comox
- Potential for a safe dedicated and separated space for active transportation
- Potential to improve and calm traffic in Comox by introducing a traffic circle at Glacier view road intersection to transition bike lanes.
- Potential to attract more ‘interested but concerned’ cyclists
  - More mode shift to active transportation could result in reduced vehicle traffic volumes along this route
- Possibility for future connections outside of project confines
  - Possibility to extend path to the 5<sup>th</sup> street bridge in Courtenay
  - Possibility to extend path to connect to waterfront trail in Comox
- Ability for partnerships on a high profile coordinated regional transportation infrastructure project involving multiple jurisdictions and agencies
- Builds upon the Ministry of Transportation and Infrastructure’s ‘BC on the Move’ document that outlines a provincial commitment to invest in walking and cycling infrastructure
- Eligibility for Bike BC grant could fund 50% of project costs
- A successful project could drive further support and investment for active transportation projects in the region given the high profile nature of the location
- Ability to incorporate the Farmview Road dedication into the proposal – taking 500m of the 3.5km total distance off Comox Road
- The estuary is a key regional public amenity and regional parks currently exist along this section of Comox Road
- Future of old Field sawmill site along Comox Road could add additional recreational amenities
- Ministry of Transportation and Infrastructure may have future plans to upgrade the 17<sup>th</sup> street/ Comox Road intersection
- Current pedestrian road crossing at KFN
- CVRD Parks
- City Park at pump station
- Businesses, Fields Site, KFN
- Estuary Itself/Ecology of area/History of area
- Courtenay and Comox areas have flexibility re: municipal standards
- Commercial draws exist for KFN (IHOS etc) and others
- Canoe Launch area is very important (across from Band Office)
- Farm View Road (possible alternate route?)
- Interpretive and Informational signage, recognition of KFN territory, respect and protection of Estuary and Heritage Values
- K’omoks First Nation participation/consultation is critical to relationships and success.



## Threats/Challenges:

- Requires a commitment to a singular vision from a number of different public entities including:
  - City of Courtenay
  - City of Comox
  - Ministry of Transportation and Infrastructure
  - CVRD
  - K'ómoks First Nation
- Requires funding contributions from a variety of jurisdictions
  - City of Courtenay
  - City of Comox
  - Comox Valley Regional District
  - Ministry of Transportation and Infrastructure
  - External funding agencies
- Public buy-in for investment required to support modal shift philosophy
- Ministry of Transportation and Infrastructure's planned Comox Road improvements without consideration of path options may constrict path options
- Ministry of Transportation and Infrastructure does not have clear guidelines related to cycling and pedestrian infrastructure within the road dedication
- Possible future sea level rise
- This could solve problems BUT have we identified if it actually feasible?
- Do we want this or do we need this? What do we actually want to achieve?
- (MOTT) not the best for cycling but at the same time not a "pinch point" (the shoulder does exist) which makes it harder to prioritize
- (MOTT) What are we actually wanting to achieve, what is the vision? Is it a showcase? Is it fundable? What is the desired outcome?
- Need to negotiate the focus, commuter or recreation or both?
- Commuter and recreation needs are different, they don't require the same facility
- We need to address safety issues for smaller kids, families
- We need to address feasibility and opportunity for tie in at either end. Tie in is critical!
- In the long term we need to consider location, climate change, storm surges, rising sea levels
- Is this the right location? Is the Dyke registered? Are there climate change implications in terms of infrastructure investment?

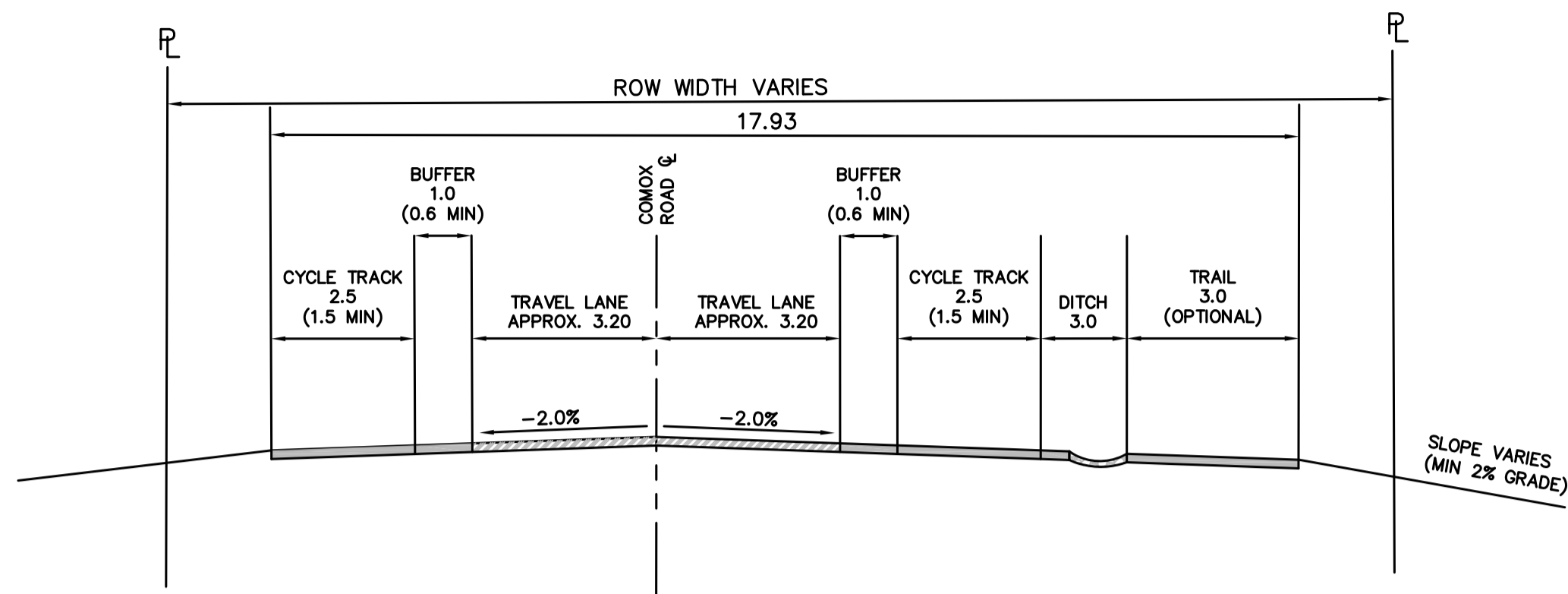
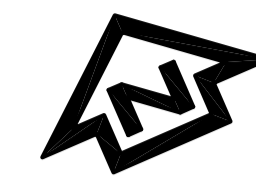
## Recommendations:

- A fully accessible 4m wide separated multi-use path that runs from the 17<sup>th</sup> Street bridge on Comox Road in Courtenay to Glacier View Road in Comox.
  - Eventual direct connection to downtown cores of Comox and Courtenay
  - Feasibility of 2m separated paths on each side of the road to be assessed during stakeholder engagement and design process.

- Technical workshop to develop partnerships on pathway funding/design/construction, involving
  - CVRD
  - City of Courtenay
  - Town of Comox
  - Ministry of Transportation and Infrastructure
  - KFN
  - Estuary protection groups
- UPDATED proposal – from technical workshops: bike lanes either side of the travelled lanes – either separated or not. A separate multi-use path on the estuary side to be considered as constraints allow.
-

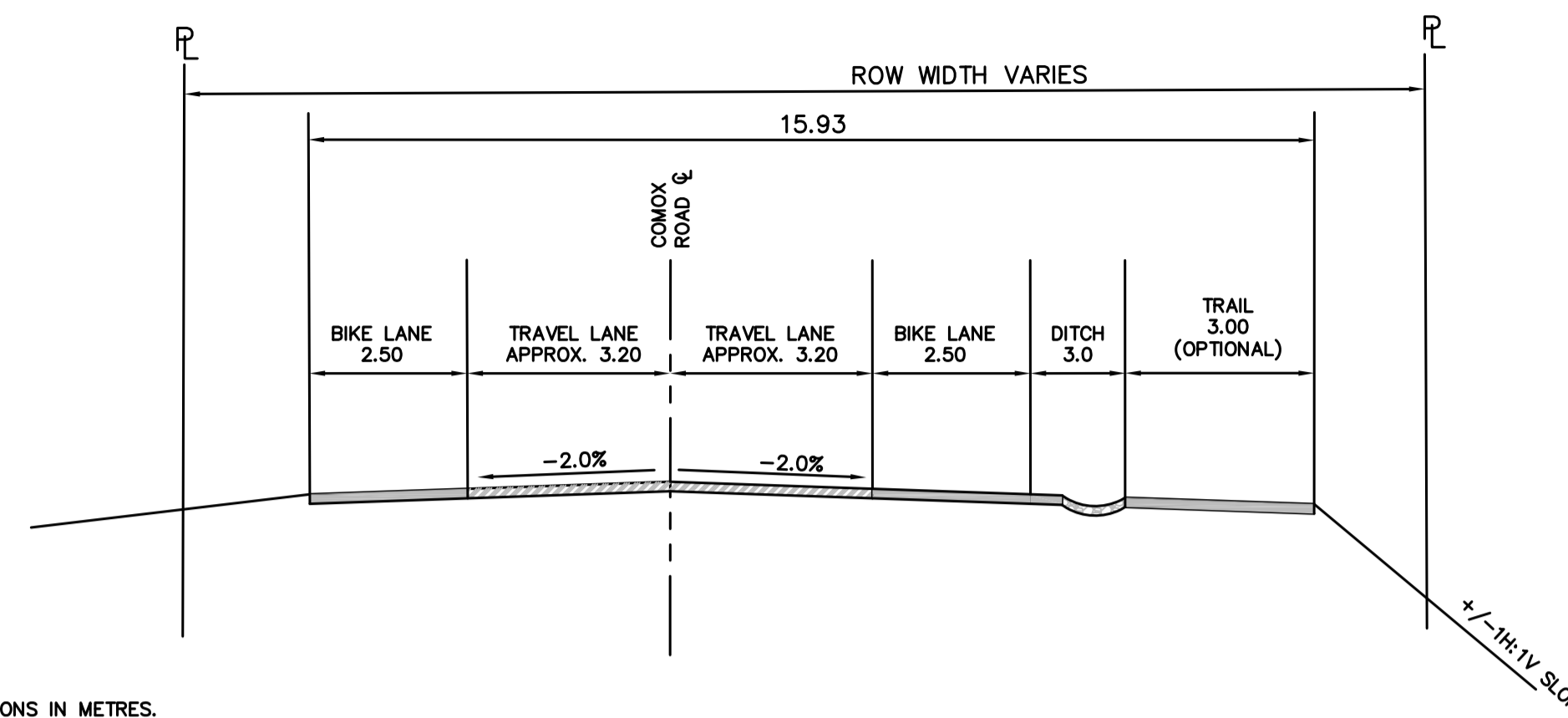
Appendix E – Typical Comox Road Bicycle Facilities  
Proposed Cross Sections





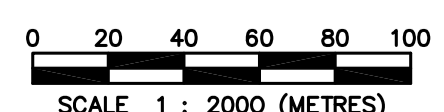
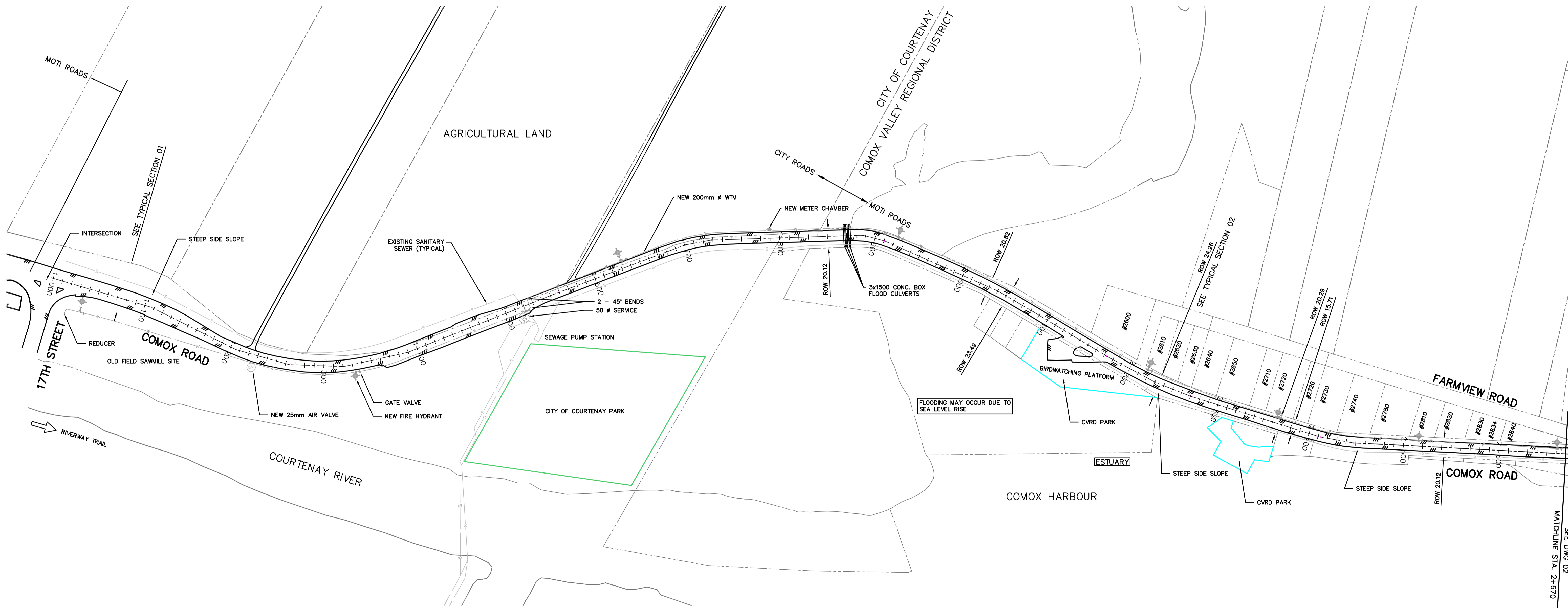
NOTE:  
ALL DIMENSIONS IN METRES.

01 - CYCLE TRACK WITH RECREATION TRAIL  
(LOOKING SOUTH TOWARDS COMOX)  
SCALE 1:100



NOTE:  
ALL DIMENSIONS IN METRES.

02 - BIKE LANES WITH RECREATION TRAIL  
(LOOKING SOUTH TOWARDS COMOX)  
SCALE 1:100

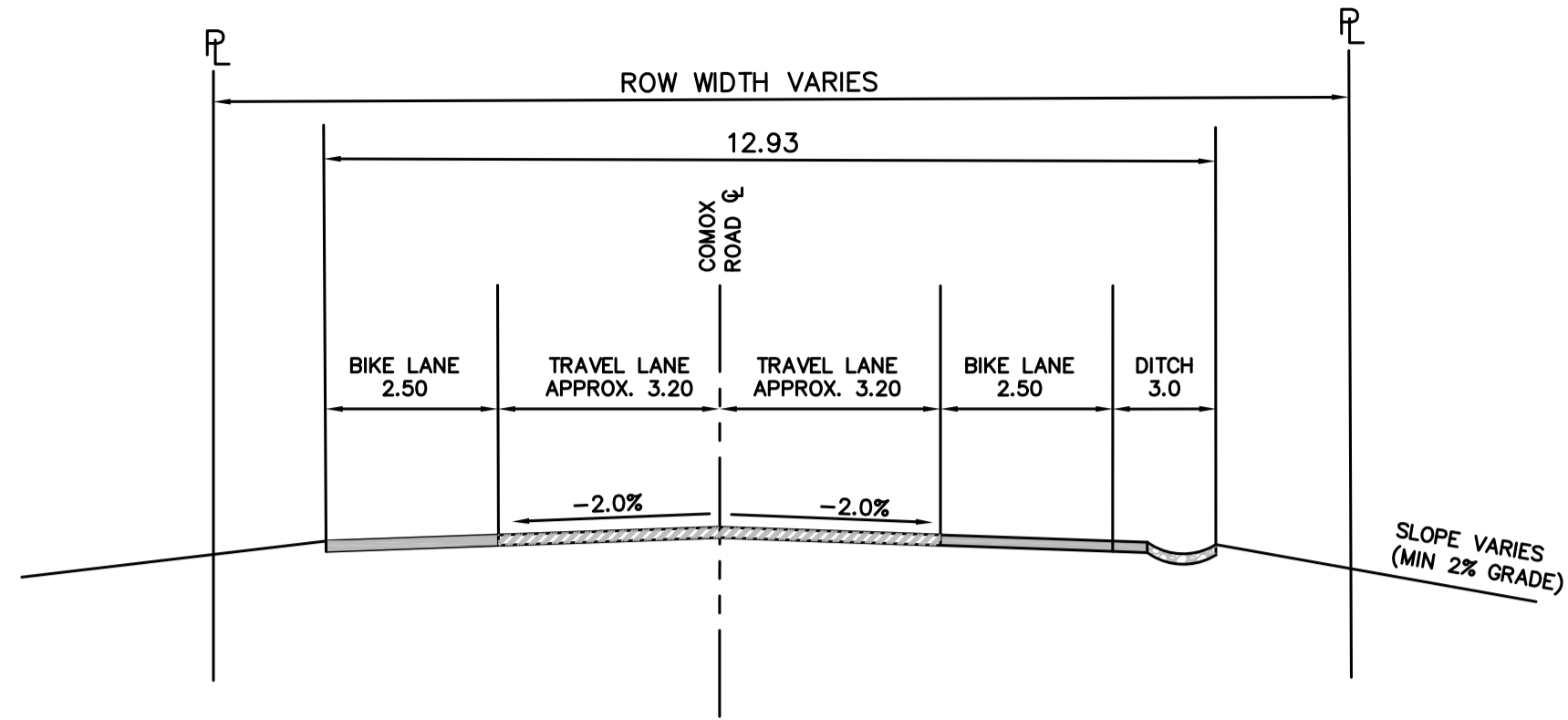
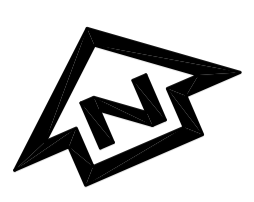


SCALE 1 : 2000 (METRES)

DRAWING 01  
24-AUG-2017

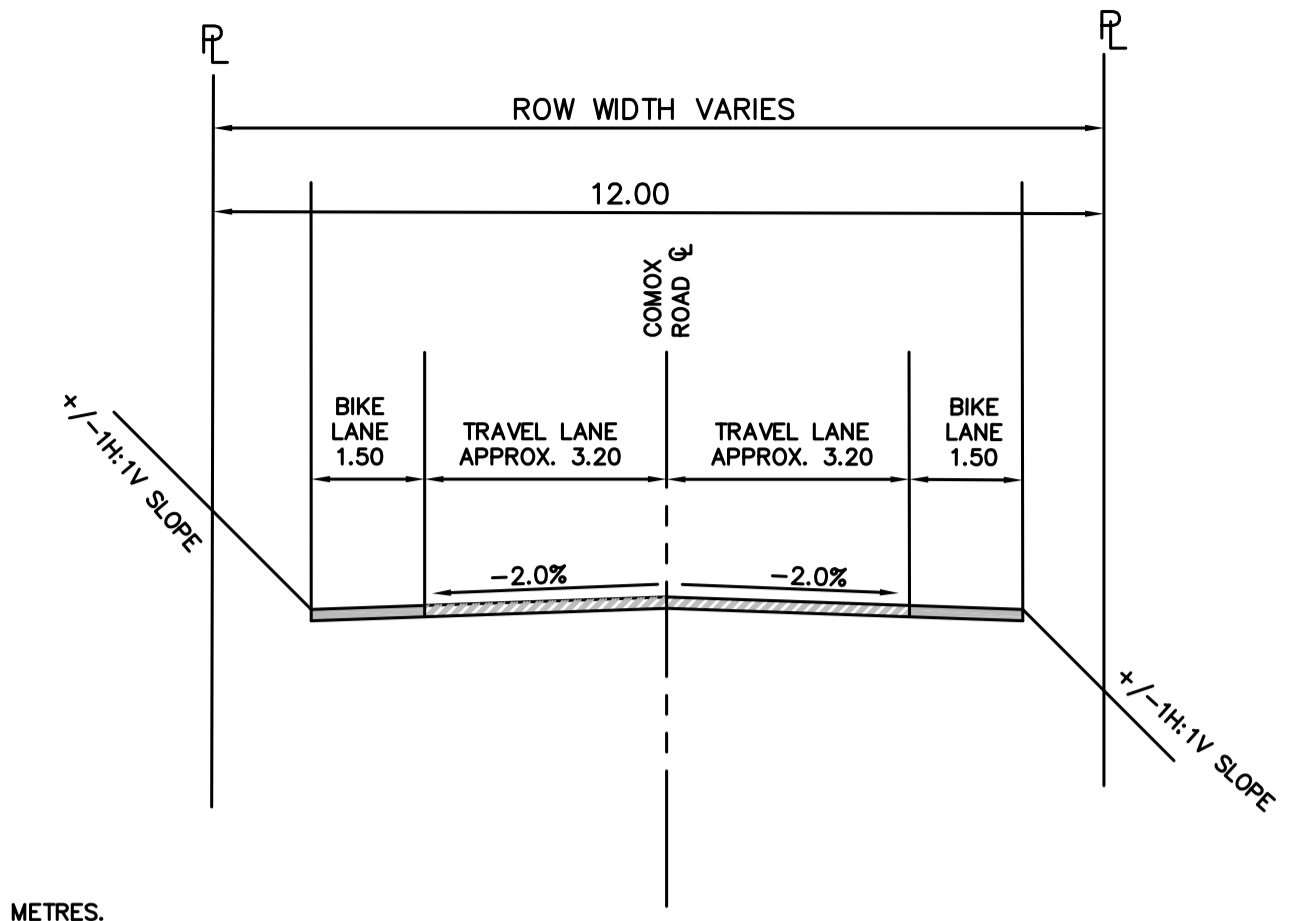


SEE DWG 02  
MATCHLINE STA. 2+670



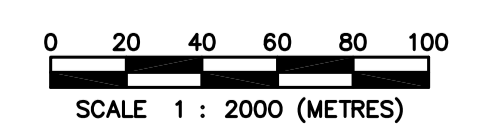
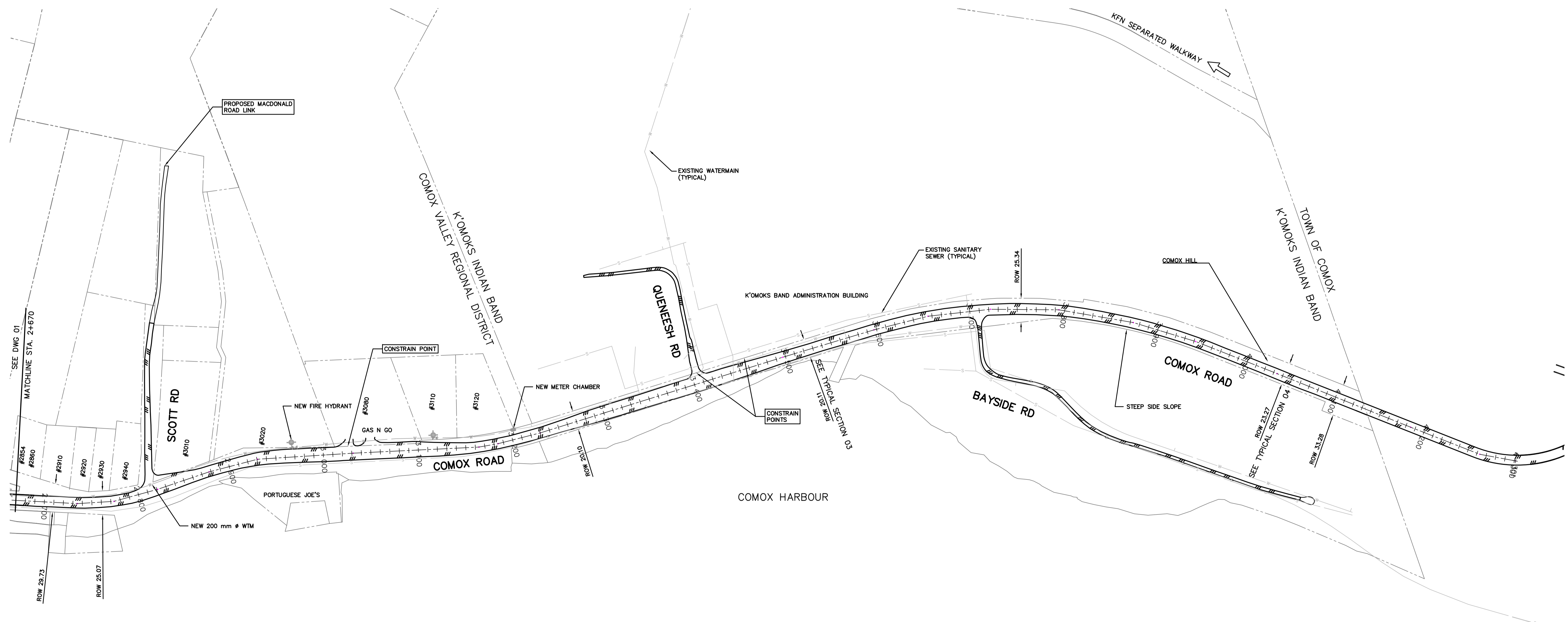
NOTE:  
ALL DIMENSIONS IN METRES.

03 – BIKE LANES WITHOUT RECREATION TRAIL  
(LOOKING SOUTH TOWARDS COMOX)  
SCALE 1:100



NOTE:  
ALL DIMENSIONS IN METRES.

04 – NARROW BIKE LANES  
(LOOKING SOUTH TOWARDS COMOX)  
SCALE 1:100



DRAWING 02  
23-AUG-2017

