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Mr Ray Fung, Director Engineering and Transportation  
District of West Vancouver,  
750 17<sup>th</sup> Street  
West Vancouver  
V7V 3T3 BC

June 13, 2019

### **Re: Proposed changes to Spirit Trail Multi Use Path & Welch Street Roadway**

Dear Mr Fung;

HUB Cycling is a charitable organization working to get more people cycling, more often and making cycling safer and better through education, action and events. More cycling reduces greenhouse gas emissions, relieves traffic congestion and means healthier, happier and more connected communities.

Thank you for inviting myself and other representatives of HUB Cycling-North Shore Committee to participate in a discussion of the District of West Vancouver and Squamish Nation's proposals for alterations to Welch Street roadway and the Spirit Trail multi-use path within the boundaries of X̱wemelch'stn also known as Capilano Indian Reserve No. 5.

Unfortunately we did not receive details of an agenda for the meeting and thus were not well prepared to provide considered commentary, but we appreciated the opportunity to listen to the objectives of the proposed alterations and to participate in a review of the details. We would like to take this opportunity to provide further comments as follows.

#### **Project Objectives**

We understand the main objective of the alterations is to improve driving access and egress to the local X̱wemelch'stn street network intersecting with Welch Street and the Spirit Trail. Welch Street has become a heavily trafficked arterial road at peak hours. We also understand that X̱wemelch'stn residents are concerned about hazards and user conflict between people walking and people cycling on the path.

#### **Spirit Trail within the North Shore bike network**

Protected cycling facilities such as the Spirit Trail are key to diversifying transportation options on the North Shore, improving health through active transportation, and addressing the climate emergency. The Spirit Trail path is currently the *only* continuous bike route on the North Shore that is protected from motor vehicles and safely useable by people cycling across the North Shore. It has arguably been the most important and successful initiative on the North Shore in encouraging more people to bike.

Although the Spirit Trail has been successful at increasing cycling, we are very concerned about user conflict with people walking and hazards related to the design of the path. We have provided improvement suggestions to all three municipalities since the path was first built and welcome any changes to the Spirit Trail which will improve its safety and utility for all users.

If the Spirit Trail remains a multi-use path, shared by people walking and cycling, it can no longer serve as the main east-west low-level route for cycling. The volume of people cycling increases every year and we expect this to continue as North Shore densifies and the surrounding municipalities and the province continue to invest in cycling improvements and climate change mitigation. The use of electric assist bikes, skateboards and scooters is growing. From a design and safety perspective, two-way multi-use paths on a two-way street are generally not advised for cycling, especially in areas with frequent crossings such as along Welch Street.

We therefore recommend that the District of West Vancouver work with the District of North Vancouver and the Province to fast-track the planning and construction of a protected bike route along the Marine Drive corridor that connects Ambleside to the 15<sup>th</sup> Street bike route in North Vancouver. We suggest that traffic counts on Welch St and the Spirit Trail would be helpful in determining a suitable capacity for such a route for people of all ages and abilities.

The following recommendations are intended for the Spirit Trail at Xwemelch'stn as a scenic slower greenway route that addresses the project objectives above and maintains or improves cycling safety.

## Recommendations

**1. Welch St Roadway Alterations:** We cautiously welcome the proposal to provide an alternative 'direct' route for cycling along the Welch Street roadway and to provide flashing beacons at the crosswalks but note that there is insufficient room to safely accommodate people on bikes. Notwithstanding the proposed 30km/h speed limit people cycling would have to share the narrow roadway lanes (which lack shoulders) with motor vehicles including busses, work trucks and large RVs. The 'direct route' will therefore be chosen by only a few cyclists. Important safety issues remain.

**Recommendations:** The Welch Street roadway proposal could be improved by the following measures:

- (a) Ensure continuity in the direct route along the adjoining sections of roadway, i.e., Bridge Street.
- (b) In addition to the 30km/hr speed limit, provide shared-lane markings and signage to require *single file* operation by all vehicles on this section of Welch St. Also consider traffic calming design measures in addition to the flashing beacons at crossings.
- (c) We welcome the proposed 'Watch for cyclists....' Signs on the crossing streets and recommend similar signs be placed on Welch Street roadway at the cross street approaches to forewarn turning traffic (such as the existing sign on Welch westbound at Lower Capilano Road). The signs should follow the latest standard Transportation Association of Canada (TAC) standards.

**2. Cross Street Alterations:** We welcome the provision of stop lines and signs at all un-signalized intersections with Spirit Trail (Ikwikws, Mathias and Whonoak) which will bring some uniformity to the cross street intersections.

***Recommendations:***

(a) We strongly recommend an improvement to the substandard sight lines for drivers stopped at the stop line at all the intersections concerned. In the interests of safety, obstructions by embankments, board fences, vegetation and miscellaneous signs should be eliminated to the extent recommended by TAC (See Attachment 1 - Figures 1-4 – Existing Sight Lines).

(b) Clarify the legality of cycling on multi-use path crosswalks. The right to ride a bike on a multi-use path crosswalk with elephant's feet should be clearly defined by appropriate signage or bylaw, as the City of North Vancouver has done<sup>1</sup>.

**3. Spirit Trail Alterations:** We are supportive of slow zones and generally lower cycling speeds on the multi-use path, but strongly advise against installing baffles. The proposed baffles on the path at the intersection approaches may decrease cycling speeds close to the baffle, but create several other hazards for all users. Baffle gates should not be used on paths to divert or slow path traffic, even if marked and lit. Baffles constitute a serious hazard to cyclists and reduce accessibility<sup>2</sup>.

We also believe it is socially, environmentally and economically questionable to discourage the movement of people who engage in healthy, low impact and low-cost activities such as walking and cycling, while people in cars have the entire width of Welch Street and other roadways without obstructions or hazards. Our recommendations below aim at safely reducing cycling speeds, reducing conflict with people walking, and improving driving access to the reserve.

***Recommendations:***

(a) Design considerations for 'slow zones' could include additional signage at the cross streets, and flexi-post (not fixed) bollards in the centre of the Spirit Trail leading up to the cross street. (See attached slow zone example on Vancouver's Seaside Greenway in Coal Harbour - Attachment 2, Figure 6b). Note the City of Vancouver also installed 'rumble strips' (painted bump strips placed closely together across the pathway) but this measure may not be as accessible for beginner riders and those using mobility devices.

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<sup>1</sup> <https://www.cnv.org/your-government/news-room/whats-new/2018/1/18/a-big-step-for-elephant-s-feet>

<sup>2</sup> The District of North Vancouver installed a baffle gate on the Spirit Trail near Pemberton Street (see Attachment 2, Figure 7). The baffle has increased the risk of falls, collisions and injuries. Older and very young cyclists as well as people who ride infrequently can lose balance while negotiating the baffle or they collide with other path users. The baffle makes path access difficult or impossible for some users, such as people with child trailers, trail-a-bikes, tricycles, tandem bikes or double strollers. Baffles also create bottlenecks and frustrate users, especially those travelling in groups, since only one person at a time can pass through (at Pemberton Street people simply walk or bike on the road around the baffle).

(b) In locations without sufficient motor vehicle refuge space, build “bend-outs” or “bend-ins” to the Spirit Trail where space permits (See Attachment 3). The bend-out/in configurations would cause people cycling to slow down on the approach to the cross street. This type of design should be achievable without damaging the existing trees and foliage, depending on the type.

(c) Provide the *minor cross street* users with the legal right of way and install Yield signs and lines for bikes on the path approaches (See Attachment 2, Figure 6a).

(i) Bend-outs would create setbacks from Welch for motor vehicles to act as a refuge or queuing area (See Attachment 3, Figure A). Signage explaining where motor vehicles should be positioned in the refuge area would be helpful when exiting the cross streets.

(ii) Bend-ins, such as may be feasible at Ikwikws St, would reduce the two stage crossing to one (See Attachment 3, Figure B).

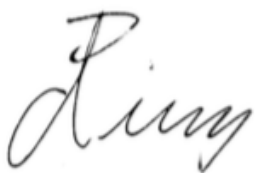
(d) Consider providing a wood chip path alongside the paved path where space allows to provide more options and space for users who prefer a soft surface (e.g., dog walkers, runners, joggers) – see Attachment 2, Figure 6b.

(e) Install signage indicating that the path is on Squamish Nation territory and requiring its respectful use (similar to the DNV sign at the Norgate entrance to the Trail – see Attachment 2, Figures 8a and 8b).

We trust these suggestions will prove helpful in achieving an optimal outcome and would be pleased to discuss them further if the District of West Vancouver and Squamish Nation wish.

In view of their interest in this matter I am copying this letter to Ms Kathleen Callow, Planner, Squamish Nation.

Yours sincerely,



Don Piercy,  
Chair, HUB North Shore Committee,  
[northshore@bikehub.ca](mailto:northshore@bikehub.ca)



Paul Stott and Peter Scholefield  
West Vancouver District Liaisons,



cc: Ms Kathleen Callow, Planner, Squamish Nation, PO Box 86131, North Vancouver V7L 4J5 BC

### Attachment 1 - Existing Sight Lines at Xwemelch'stn Local Street Intersections with Spirit Trail



Figure 1a Ikwikws St looking west



Figure 1b Ikwikws St looking east



Figure 2a Mathias St looking west



Figure 2b Mathias St looking east



Figure 3a Lower Capilano Rd looking west



Figure 3b Lower Capilano Rd looking east

## Attachment 1 (continued) – Existing Sight Lines at Xwemelch'stn Local Street Intersections with Spirit Trail



Figure 4a Whonoak St looking west



Figure 4b Whonoak St looking east

### Note:

TAC Guidelines<sup>3</sup> for mid-block crossings (s.5.6.3.2) state:

(a) “At the approach to mid-block crossings, the multi-use path should be designed with speed reducing elements such as *alignment curvature* or uphill grade change in advance of the crossing. Other measures of a non-geometric nature that may be applied include signage, textural surface contrast and pavement markings.....to advise which road user has the legal right of way.”; and

(b) “Adequate *sight distance* along the roadway (bike path) is required so that a motorist may react to the presence of a cyclist within the cross ride and cyclists may decide if it is safe to cross” . **TAC Guidelines Figure 5.6.12 and Table 5.6.1** indicate a sight distance of at least *70m* is required based on a 30km/h speed limit

<sup>3</sup> Geometric Design Guide for Canadian Roads, Chapter 5 – Bicycle Integrated Design Transport Association of Canada, June 2017

## Attachment 2 – Protected MUP Intersection Treatments



**Figure 5a Arbutus Trail - curved (bend-out) alignment at signalized intersection approach to major street (Note separated bike and pedestrian lanes)**



**Figure 5b Arbutus Trail  
Note separated asymmetric pedestrian and (two-way) bike lanes and adjacent wood chip running path**



**Figure 5c Railway Trail - curved (bend in) alignment at intersection approach to minor street with stop line  
(Note separated directional MU lanes with bollards; green painted crossing; and bike crossing permit and yield to pedestrians signs)**

### Attachment 2 (cont'd) – Protected MUP Intersection Treatments



Figure 6a Arbutus MU Trail – Yield control at minor street intersection without stop lines



Figure 6b Coal Harbour Bike Trail – Slow Zone. Note rumble strips, markings and flexi-posts



Figure 7 Spirit Trail near Pemberton Ave, North Vancouver (looking east) – existing baffle gate as modified by DNV to permit traverse by larger vehicles.



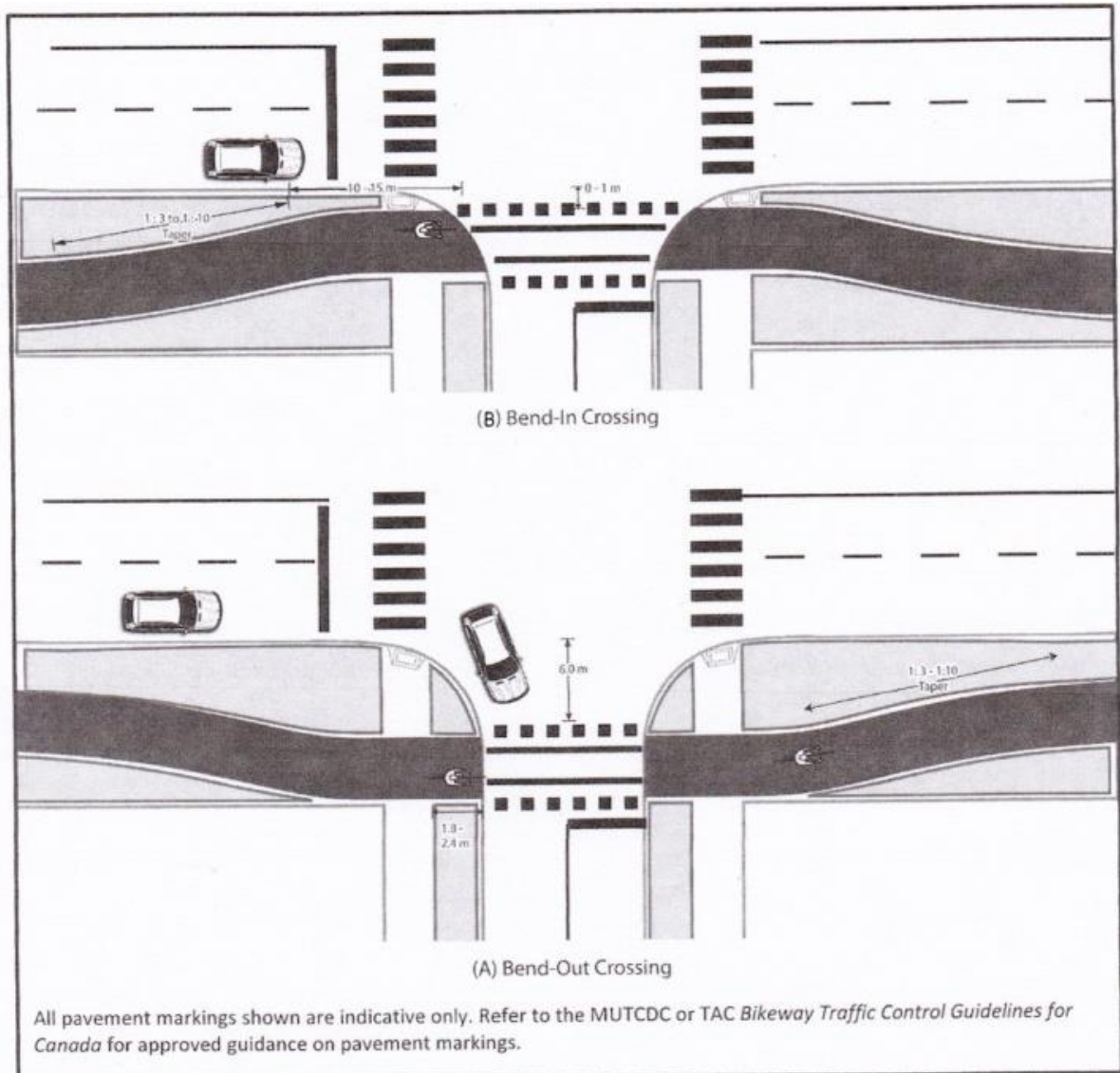
Figure 8a Existing sign at Norgate section of Spirit Trail

Figure 8b Existing sign at Lower Capilano Rd





### Attachment 3 - "Bend-out" & "Bend-in" Intersection Configurations



*Geometric Design Guide for Canadian Roads, Chapter 5 - Bicycle Integrated Design (Figure 5.6.10), TAC June 2017.*