



April 14, 2017

To: Maria Guerra <mguerra@mapleridge.ca>, Maple Ridge Engineering
cc: Michael Eng, Maple Ridge Engineering Department
Coun. Kiersten Duncan, Maple Ridge Council liaison, ATAC

Re: **Open House April 11, 2017**
Design multi-use path 117th Ave. between Burnett Street and 231 Street

Hi Maria,

As always, great talking to you and Michael last Tuesday.

Our committee appreciates the effort made as shown in the design of a multi-use path on the north side of 117th Ave., in order to provide a safe place for kids to walk and bike to and from Golden Ears Elementary School.

We understand the rationale behind the proposed design:

- Most likely the majority of children walking and biking would be coming from the neighbourhoods north of 117th Ave. A popular route would be via the pedestrian pathway connecting the intersection of 229th Street and Cliff Ave. to 117th Ave.
- Children using the multi-use path coming from north of 117th Ave. will only have to cross at the crosswalk at the corner of 117th and 231 Street to get to Golden Ears Elementary School (as opposed to having to cross 117th Street mid-block to get to a bicycle facility on the south side, and crossing 3 side streets along 117th Ave. - only one of which is a through street, connecting to 116th Ave.).
- The raised crossings at each driveway will slow down turning cars, reducing the likelihood of people walking or biking getting hit.
- A raised multi-use path makes it less likely that cars will park in the space that's meant for people walking and biking.

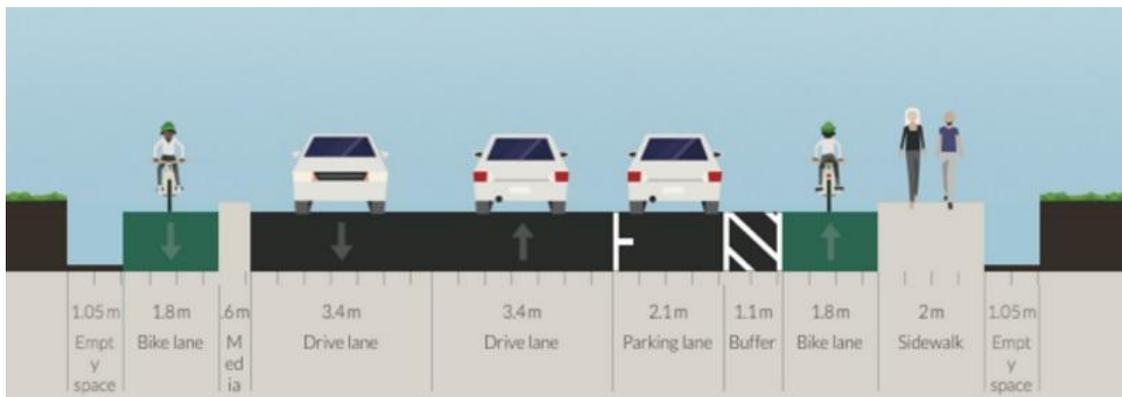
Despite these good arguments, we have strong reservations about the proposed design for the following reasons:

- As shown in research by Harris et al¹ (figure 2), the risk is about 8 times higher when a cyclist is coming in the direction opposite to expectation, compared to the expected direction. The same research paper (figure 3) also shows that multi-use paths have a slightly higher risk than bike-only paths at non-intersection locations.
- We recognize the benefit of a raised crossing; however, with about 20 driveways along the 500 meter stretch of 117th Ave., there are a significant number of locations where potential conflict can occur between those walking and biking in both directions, and cars.
- Parked cars and trucks along the multi-use path means reduced visibility of people on bikes and pedestrians (especially child-sized ones) to drivers crossing the bi-directional multi-use path onto a driveway.
- Anecdotal evidence suggests that without bollards, the chance of cars being parked on a wide pathway such as the one proposed is high. It's a very common problem. For example, parked cars are frequently seen on the new 203rd Street separated cycle track.



- If one bollard is placed on each side of each driveway, at least 40 bollards will be needed along 117th Ave. Bollards pose a hazard to people on bikes. Should the design for a multi-use path be selected despite our concerns, it would be preferable to use flexible plastic bollards, with reflectors, rather than the ones commonly used in Maple Ridge, which can lead to serious injury. We would recommend installation of the bollards during initial construction of the path.
- A bi-directional MUP on the north side of the road means that residents from the neighbourhoods to the south will need to cross 117th at various locations to reach the multi-use pathway as there is no space available to walk or bike on the south side.
- Having cycling facilities consistently on both sides of the road provides continuity and better access for residents, and should be the preferred solution where possible.

As our preferred solution, we would suggest something like the following lay-out:



- **Preferred option #1:** The bike lane on the north side should be grade separated from the roadway and painted green, to alert drivers to the potential presence of cyclists.
- **Second choice option #2:** The bike lane on the north side could be at roadway level, painted green. Placement of bollards would not be necessary, and it's more likely that cyclists and pedestrians will each use their own space. Potential disadvantage: drivers may not slow down sufficiently for the bike lane, as only the sidewalk will be raised.
- The sidewalk on the north side should be grade separated from the bike lane.
 - This will discourage pedestrians from using the bike lane instead of the sidewalk.
 - The grade separations between roadway and bike lane and bike lane and sidewalk will slow down cars when turning into a driveway.
 - The grade separation between bike lane and adjacent sidewalk will discourage drivers from using them as a parking lane.
- A buffer between parked cars and bike lane will keep people on bikes out of the door zone, as well as improve sightlines for drivers turning into driveways.
- A raised curb or a "picket fence" could be used as a barrier to keep parked cars off the bike lane on the south side.
- Access for residents south of 117th Ave. is improved.
- Drive lanes can be narrowed to 10' to slow down cars.
- A crosswalk with elephant feet should be added to cross 117th Ave. between the pedestrian pathway and the bike lane on the south side.



Kind regards,

Barry Bellamy, Co-Chair
HUB Cycling
Maple Ridge/Pitt Meadows Chapter

JC/IC/BB/DW/AC

ⁱ [Comparing the effects of infrastructure on bicycling injury at intersections and non-intersections using a case–crossover design](#), Harris et al (2012)