

Comox Valley Cycling Coalition: [CycleCV.com](http://CycleCV.com)



## **Comox Valley Cyclist Count Report on Findings**

Version 1.0  
Gregg Strong  
July 5, 2019

# Table of Contents

<b>1. Introduction .....</b>	<b>4</b>
<b>2. A Word of Thanks.....</b>	<b>4</b>
<b>3. Key Findings .....</b>	<b>4</b>
<b>4. Some Words on Methodology &amp; Numbers .....</b>	<b>5</b>
<b>5. Consolidated Findings .....</b>	<b>6</b>
5.1 <i>Counts by Location &amp; Time.....</i>	6
Figure 1: Total cyclists counted at each location (11am to 7pm).....	6
Figure 2: Map of counting locations, with cyclist counts, by shift.....	7
Figure 3: Cyclist counts by location, shift and hour .....	8
5.2 <i>Cyclist Demographics.....</i>	8
Figure 4: Counts by gender, and % female, by location .....	8
Figure 5: Counts by gender, and % female, by hour of day .....	9
Figure 6: Counts of cyclists, by age range, and % 60 & above .....	9
5.3 <i>Ebikes .....</i>	10
Figure 7: Counts of ebikes, by hour of day .....	10
5.4 <i>Wearing helmets .....</i>	11
Figure 8: % of cyclists wearing a helmet, by location .....	11
5.5 <i>Cyclists and left turn lanes .....</i>	11
Figure 9: Counts of cyclists using left turn lanes vs sidewalks .....	12
5.6 <i>How cyclists choose to cross the bridges .....</i>	13
Figure 10: How cyclists cross the bridges, by shift .....	13
Figure 11: Offroad pathway (off left side of Old Isle Hwy) approaching Hwy19A & Headquarters & Old Highway .....	14
<b>6. Summary reports on counting locations .....</b>	<b>15</b>
6.1 <i>5<sup>th</sup> Street Bridge (total count - 362).....</i>	15
Figure 12: 5 <sup>th</sup> St Bridge - location layout & counts by hour.....	15
Figure 13: 5 <sup>th</sup> St Bridge – Summary counts by hour.....	16
Figure 14: 5 <sup>th</sup> St Bridge – other cycling characteristics .....	16
6.2 <i>Headquarters Rd &amp; Hwy 19A (north) &amp; Old Island Hwy (total count: 188).....</i>	18
Figure 15: HQ & Hwy19A & Old Isle Hwy – road segments to & from, & counts by hour.....	18
Figure 16: Headquarters & Hwy19A & Old Isle Hwy – Summary counts by hour .....	19
Figure 17: Headquarters & Hwy19A & Old Isle Hwy – other cycling characteristics .....	19
Figure 18: Cyclist traffic into (left) and out from (right) HQ & Hwy19A & Old Isle Hwy, by road segments ...	19
6.3 <i>17<sup>th</sup> Street Bridge &amp; Comox Road (total count - 187) .....</i>	21
Figure 19: 17 <sup>th</sup> Street Bridge & Comox Road – road segments to & from, & counts by hour .....	21
Figure 20: 17 <sup>th</sup> Street Bridge & Comox Road – Summary counts by hour .....	22
Figure 21: 17 <sup>th</sup> St Bridge & Comox Rd – other cycling characteristics .....	22
Figure 22: Cyclist traffic into (left) and out from (right) 17 <sup>th</sup> St Bridge & Comox Rd, by road segments .....	23
6.4 <i>Courtenay Riverway at Skypark (total count - 186).....</i>	24
Figure 23: Courtenay Riverway at Skypark – road segments to & from, & counts by hour.....	24
Figure 24: Courtenay Riverway & Skypark – Summary counts by hour .....	25

Figure 25: Courtenay Riverway & Skypark – other cycling characteristics .....	25
Figure 26: Cyclist traffic into (left) and out from (right) Courtenay Riverway & Skypark, by pathway segments .....	26
Figure 27: Photo of south vehicle entrance to airpark crossing the ped/cycle pathway .....	26
<b>6.5 Fitzgerald Ave &amp; 17<sup>th</sup> Street (total count - 137).....</b>	<b>27</b>
Figure 28: Fitzgerald Ave & 17 <sup>th</sup> Street – road segments to & from, & counts by hour .....	27
Figure 29: Fitzgerald Ave & 17 <sup>th</sup> Street – Summary counts by hour.....	28
Figure 30: Fitzgerald Ave & 17 <sup>th</sup> Street – other cycling characteristics.....	28
Figure 31: Cyclist traffic into (left) and out from (right) Fitzgerald Ave & 17 <sup>th</sup> Street, by road segments .....	29
<b>6.6 Knight Rd &amp; Pritchard Rd &amp; Military Row (total count - 133).....</b>	<b>30</b>
Figure 32: Knight & Pritchard & Military – road segments to & from, & counts by hour .....	30
Figure 33: Knight & Pritchard & Military – Summary counts by hour.....	31
Figure 34: Knight & Pritchard & Military – other cycling characteristics .....	31
Figure 35: Cyclist traffic into (left) and out from (right) Knight & Pritchard & Military, by road segments .....	32
<b>6.7 Ryan Road &amp; Back Road (total count - 124).....</b>	<b>33</b>
Figure 36: Ryan Road & Back Road – road segments to & from, & counts by hour .....	33
Figure 37: Ryan Road & Back Road – Summary counts by hour.....	34
Figure 38: Ryan Road & Back Road – other cycling characteristics.....	34
Figure 39: Cyclist traffic into (left) and out from (right) Ryan Road & Back Road, by road segments .....	35
<b>6.8 Hwy 19A (south) &amp; Anfield Avenue (total count - 91) .....</b>	<b>36</b>
Figure 40: Hwy 19A & Anfield Ave – road segments to & from, & counts by hour .....	36
Figure 41: Hwy 19A & Anfield Ave – Summary counts by hour.....	37
Figure 42: Hwy 19A & Anfield Ave – other cycling characteristics .....	37
Figure 43: Cyclist traffic into (left) and out from (right) Hwy 19A & Anfield Ave, by road segments .....	38
<b>6.9 Anderton Rd &amp; Idiens Way &amp; Dryden Rd (total count - 86) .....</b>	<b>39</b>
Figure 44: Anderton Rd & Idiens Way & Dryden Rd – road segments to & from, & counts by hour.....	39
Figure 45: Anderton Rd & Idiens Way & Dryden Rd – Summary counts by hour.....	40
Figure 46: Anderton Rd & Idiens Way & Dryden Rd – other cycling characteristics .....	40
Figure 47: Cyclist traffic into (left) and out from (right) Anderton Rd & Idiens Way & Dryden Rd, by road segments .....	41
<b>6.10 Anderton Road &amp; Ellenor Road (total count - 56).....</b>	<b>42</b>
Figure 48: Anderton Rd & Ellenor Rd – road segments to & from, & counts by hour .....	42
Figure 49: Anderton Rd & Ellenor Rd – Summary counts by hour .....	43
Figure 50: Anderton Rd & Ellenor Rd – other cycling characteristics .....	43
Figure 51: Cyclist traffic into (left) and out from (right) Anderton Rd & Ellenor Rd, by road segments.....	44
<b>7. APPENDIX 1: Sample Counting Forms.....</b>	<b>45</b>
Figure 52: Sample 'Main Coding Form' for recording passing cyclists .....	45
Figure 53: Sample 'Other Cyclist Characteristics' form .....	46

## 1. INTRODUCTION

On Thursday, June 13, the Comox Valley Cycling Coalition (CVCCo) conducted a count of passing cyclists at 10 key cycling locations in the Comox Valley. 30 volunteers assisted, enabling two 4 hour shifts to be implemented: from 11am to 3pm, and 3pm to 7pm.

Objectives of the counting initiative were:

- to enhance current knowledge about Comox Valley cycling routes and riders, and
- to generate an information resource to support CVCCo planning and advocacy

This report consolidates and presents data gathered during the counting initiative, at both the summary and the individual location levels. More detailed analysis will be undertaken as these findings are used in support of future CVCCo activities. These findings will be shared with our volunteers, broader CVCCo membership, and various government and non-government partners within the Comox Valley.

CVCCo may implement a follow-up cyclist count in September 2019. This would enlarge the sample size, expand the locations covered, and allow for some changes in approach, building on lessons learned. Efforts are also underway to understand whether mechanical counters (tubes) might improve this information gathering.

If you have questions about this report, please contact the Comox Valley Cycling Coalition via our website ([CycleCV.com](http://CycleCV.com)), or this email address: [CycleCV@gmail.com](mailto:CycleCV@gmail.com).

## 2. A WORD OF THANKS

Special thanks to the volunteers who participated and made this cyclist count possible. They truly went above and beyond: bringing lots of positive energy, and sharing many useful insights. Thanks also to CVCCo Board members for their help and support.

## 3. KEY FINDINGS

- A total of 1,550 cyclists were counted at the 10 tracking locations. Some cyclists will have been counted at more than one location as they proceeded along their ride.
- The busiest hour during the counting day was between 4pm and 5pm, with 278 cyclists tallied. This likely reflects, at least in part, a commuting cohort making their way home. The slowest hour was between 1pm and 2pm, with 152 tallied.
- Two-thirds of cyclists were coded as male; one-third as female. This varied somewhat by location. In terms of hour of day, the highest percentage of female riders tallied (41%) was during the final hour of counting, 6pm to 7pm.
- 80% of cyclists were coded wearing a helmet. Anderton & Ellenor had a 100% rate, while Headquarters & Hwy19A & Old Highway had the lowest percentage at 63%.
- Approximately 300 cyclists, roughly 20% of total riders counted, were coded as older (60 years and above).

- 135 ebikes were coded, just under 9% of total counts. It is likely the ebike tally is on the low side, as we had not trained volunteers on how to recognize ebikes, and our tally form focused most attention on rider (vs bicycle) characteristics.
- Most cyclists on the 2 bridges over the Courtenay River prefer to cross on the sidewalks. The large majority of cyclists using bridge sidewalks choose to ride vs walk.
- 5th Street Bridge stands out for the highest cyclist counts, as well as the complexity of the bridge as a route for cyclists and other users.
  - Most cyclists use the narrow sidewalks, and most of these ride vs walk. Many cyclists take a sidewalk on the side of the bridge against the flow of traffic. The sidewalks are also heavily used by pedestrians and mobility scooters.
  - The bridge can also be dangerous for cyclists taking the roadway: if they are not confident enough to 'take the lane', they can get pinched against the curb/railing by aggressive motorists trying to pass from behind, even into oncoming traffic.
- The 4 locations with the highest cyclist counts were close to the Courtenay River crossings: 5<sup>th</sup> Street Bridge, Headquarters & Hwy19A & Old Island Hwy, 17<sup>th</sup> St Bridge & Comox Rd, and Courtenay Riverway & Skypark. Fitzgerald & 17<sup>th</sup>, and Ryan & Back Roads also had counts of over 100.
- Some busier intersections where counts were conducted had left turn lanes. These are mostly on arterial routes, used mostly (we think) by more confident cyclists. Yet a clear majority of cyclists chose to use sidewalks vs the left turn lanes, suggesting that even experienced cyclists are not comfortable with the intersection designs.

#### 4. SOME WORDS ON METHODOLOGY & NUMBERS

Most count locations chosen were intersections. This allowed us to gather information on 2 roads of interest. It also enabled us to gain insights on how cyclists engage with the intersections, some of which have high motor vehicle crash occurrence rates.

Roadside counters had 2 forms to complete. Sample forms are attached in [Appendix 1](#). The main form gave 1 'tick' for each passing cyclist – with the tick to be placed within the appropriate hourly block of time, as well as the approach and onward routes used.

The second form gathered characteristics such as gender, older riders, and riding an ebike. A single rider might receive multiple ticks on this form. These roadside determinations are often subjective and/or hastily made. Volunteers were briefed, but not trained, and some variations in coding behaviour were likely. Findings based on this second form should be used only to inform general indications.

It is important to note that counts from the different locations are not mutually exclusive. It is a certainty that some cyclists were counted more than once at different locations as they proceeded along their ride. In addition, as our interest was in cyclist volumes, if cyclists passed by a counting station more than once (for example, going somewhere, then coming back) they were counted each time.

We had chosen a weekday as we wanted to capture commuting cyclists (and maybe a few students). We initially hoped to implement 3 shifts, but had to drop a 7 to 11am early shift. As such, these cyclist counts do not represent a full day's sample. Although we missed the early commute, we expected to

get commuters on their way home. We believe that for some locations we may have missed a cohort of morning recreational riders.

This cyclist count was for one weekday, and sample sizes at some locations were modest. Findings here should be viewed as general indications that can give us insight into ridership profiles and relative cyclist traffic volumes, at different locations and at different times.

Several volunteers noted bikes on the front of Transit busses: these were not counted, but we have approached Transit to find out if they have any stats on bikes carried.

Weather on count day, June 13, was favourable. These results likely represent a higher-end sample of mid-June cyclists. No events or roadway construction sites that might impact cyclist traffic were noted.

## 5. CONSOLIDATED FINDINGS

This section presents high level findings, based on data aggregated from all 10 tracking sites.

### 5.1 Counts by Location & Time

The aggregate total of cyclists counted at all locations was **1,550**. As noted in the preceding section, this total is not mutually exclusive.

*Figure 1: Total cyclists counted at each location (11am to 7pm)*

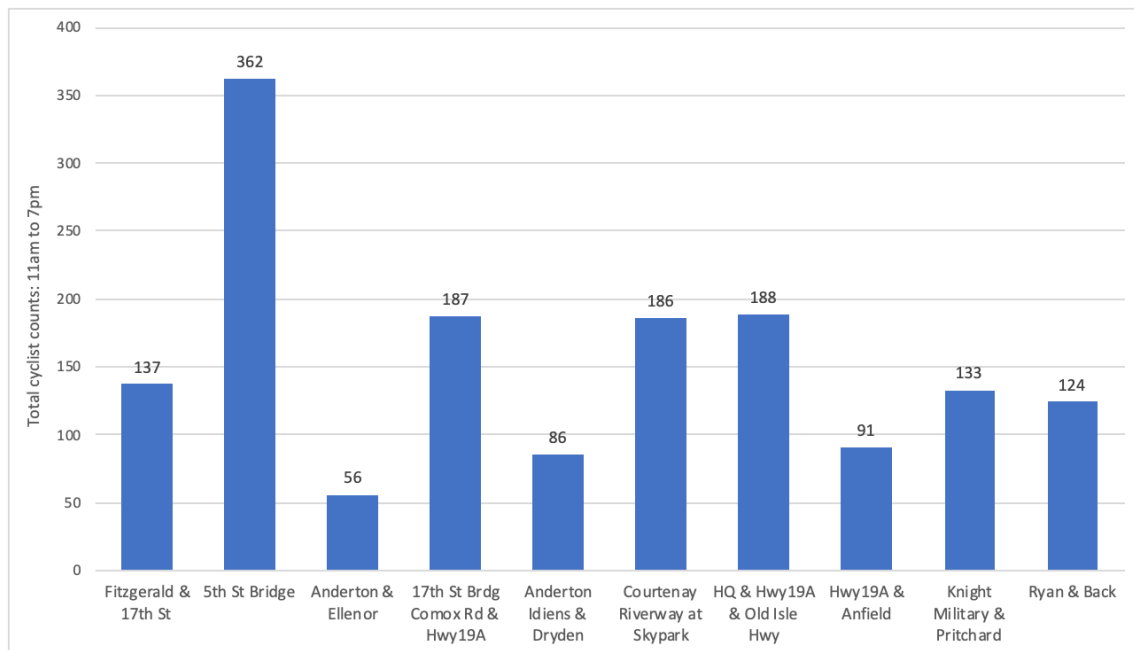


Figure 1 (above) shows total counts by counting location. *5<sup>th</sup> Street Bridge* stands out, nearly double the next highest counts shown by 3 other sites near the river: 1) *Headquarters & Hwy 19A & the Old*

Highway, 2) 17<sup>th</sup> Street Bridge & Comox Road, and 3) Courtenay Riverway at Skypark. The lowest counts were at Anderton & Ellenor, along a route to Little River Ferry Terminal.

Figure 2 below gives a rough view of the counting locations on a map of the Comox Valley. Each location shows counts by shift, and we can see that the 3 to 7pm shift had higher counts for most locations.

Figure 2: Map of counting locations, with cyclist counts, by shift

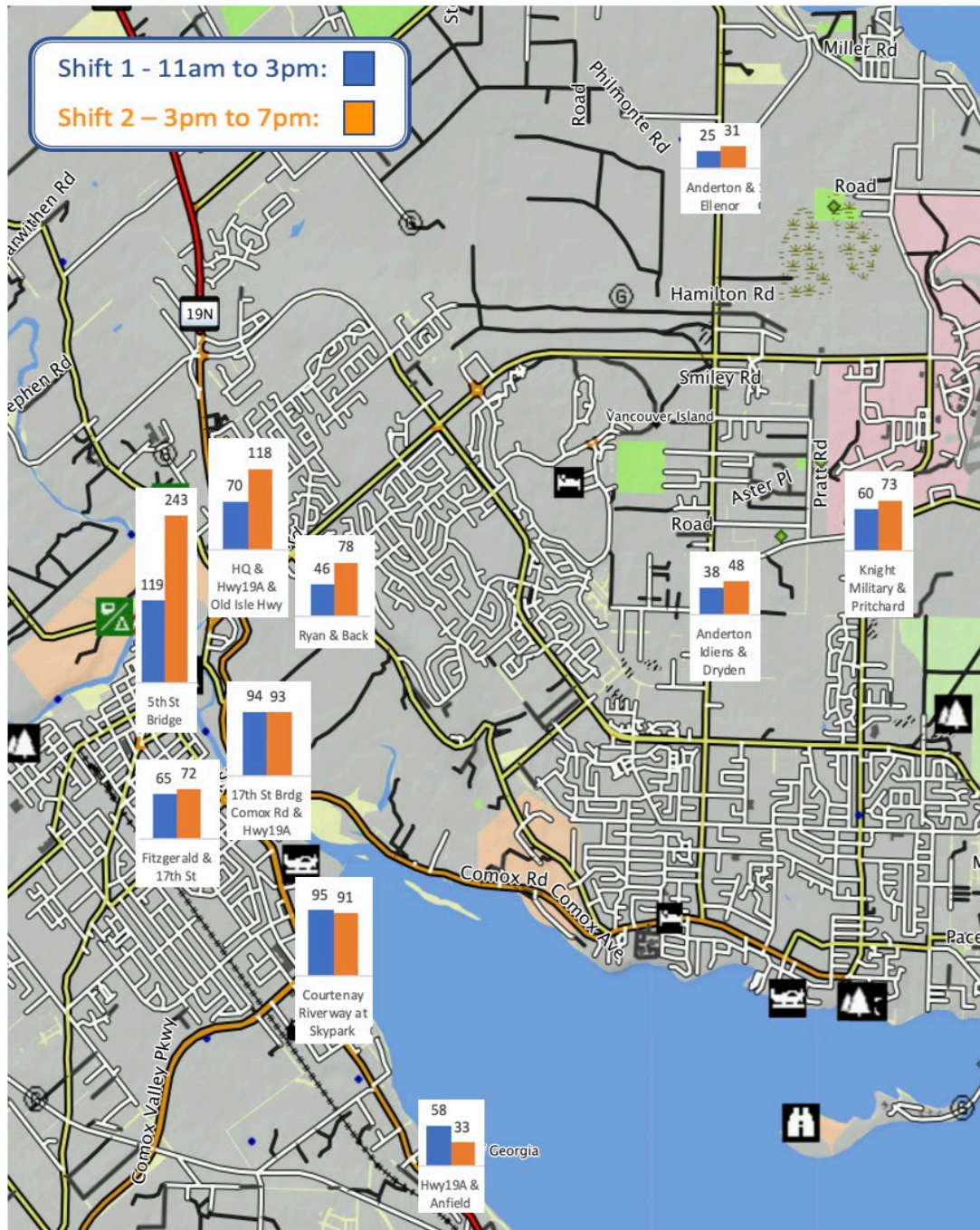




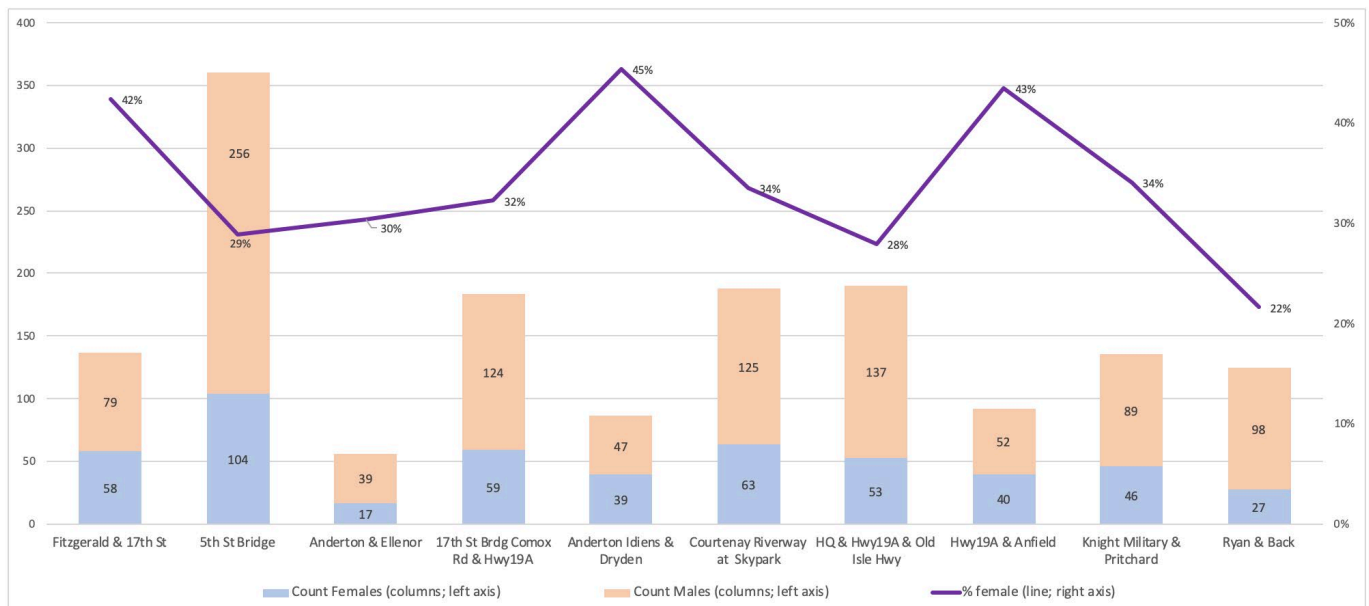
Figure 3: Cyclist counts by location, shift and hour

Locations	Count Rank	shift 1					shift 2					Grand Total
		11 to 12	12 to 13	13 to 14	14 to 15	shift 1 Total	15 to 16	16 to 17	17 to 18	18 to 19	shift 2 Total	
5th St Bridge	1	37	28	30	24	119	64	74	61	44	243	362
HQ & Hwy19A & Old Isle Hwy	2	16	18	20	16	70	31	40	35	12	118	188
17th St Brdg Comox Rd & Hwy19A	3	24	26	23	21	94	23	32	28	10	93	187
Courtenay Riverway at Skypark	4	32	24	16	23	95	18	25	30	18	91	186
Fitzgerald & 17th St	5	22	14	18	11	65	11	21	22	18	72	137
Knight Military & Pritchard	6	18	13	7	22	60	31	22	7	13	73	133
Ryan & Back	7	10	11	13	12	46	21	22	20	15	78	124
Hwy19A & Anfield	8	8	12	16	22	58	5	13	8	7	33	91
Anderton Idiens & Dryden	9	19	9	4	6	38	9	14	12	13	48	86
Anderton & Ellenor	10	5	7	5	8	25	4	9	9	9	31	56
Hourly Totals		191	162	152	165	670	217	272	232	159	880	1,550

One can see above that the busiest hours were from 3 to 6 in the afternoon, all with total counts above 200. Part of this is no doubt due to commuting cyclists, with both bridges, along with "Hwy 19 & HQ", showing 4 to 5pm as the busiest hour. Note that 11 to 12 was the busiest hour in the first shift (11 to 3). This may suggest there is a morning recreational cohort, and that the count may have missed additional recreational riders in earlier hours.

## 5.2 Cyclist Demographics

Figure 4: Counts by gender, and % female, by location



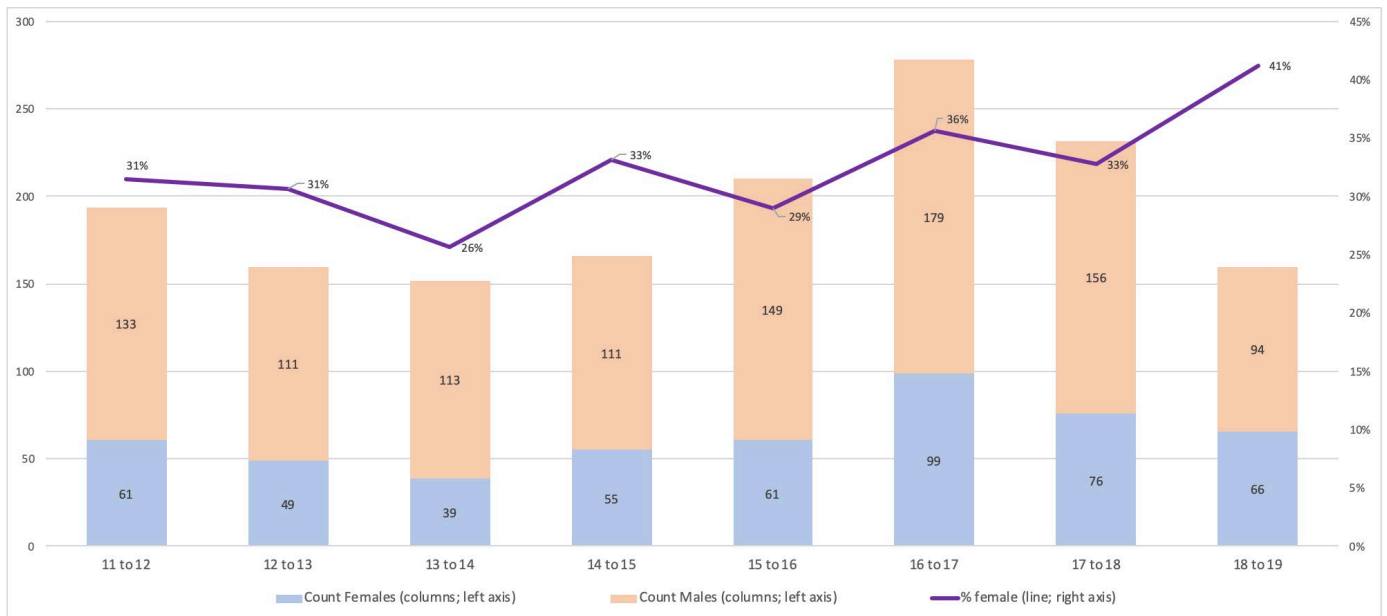
We can see in Figure 4 above that the majority of riders at all locations were coded as male. There is variation in the % female by location.



Overall, 32.6% of cyclists counted were female. This aligns with the figure of 33% of Comox Valley cycle commuters being women, noted in the 2018 report [Mid Vancouver Island Cycling Feasibility Study](#), prepared by the BC Cycling Coalition (with CVCCo as a local partner).

Interestingly, 63% of 368 respondents to an online survey on Comox Valley active transportation conducted by BCCC were female. It may be that although females are a minority of cyclists on the roads, they are more inclined to respond to online cycling surveys.

*Figure 5: Counts by gender, and % female, by hour of day*



*Figure 6: Counts of cyclists, by age range, and % 60 & above*

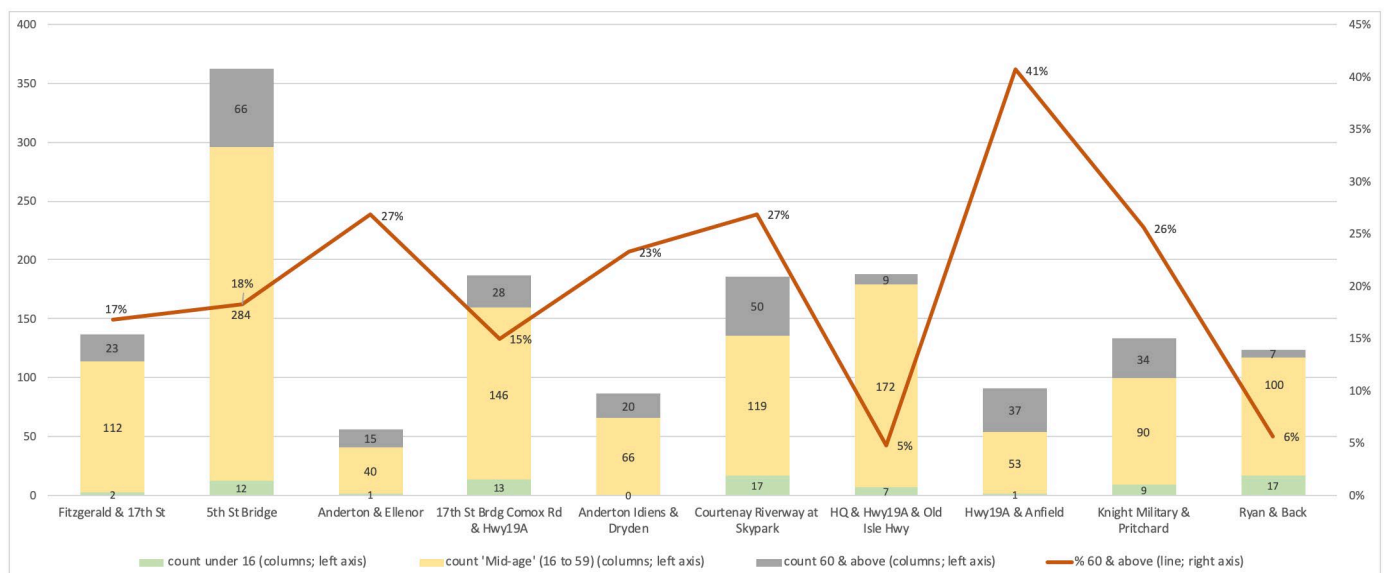


Figure 6 preceding is based on data compiled by roadside counters who were asked to make quick (sometimes subjective) judgments as to whether passing cyclists might be either under 16 years of age, or 60 and above.

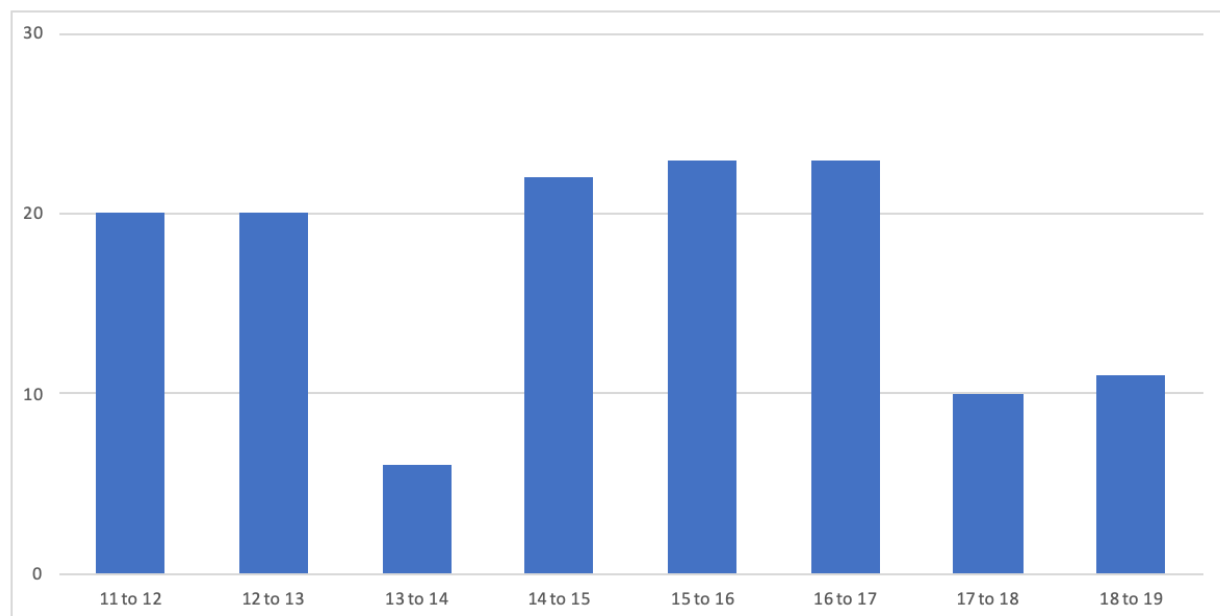
There is a significant senior cycling presence on Comox roads and cycle paths, with nearly 300 riders (just under 20% of total counts) coded as '60 & above'. There are variations in the % coded as seniors, with busy central locations such as *HQ & Hwy19*, and *Ryan & Back* (perhaps with low recreational representation) coded low for a senior presence.

*5<sup>th</sup> Street Bridge* had the highest count of older riders, followed by *Courtenay Riverway*. Looking at percentage of older riders, *Hwy19A & Anfield* topped the list. The last two hours, 5 to 7pm, had the fewest older riders. Roughly 70% of older riders were male (fairly close to the two-thirds total of all riders).

The youth count is too small to be interpreted with confidence. The count was undertaken on a weekday (school day), with counting stations not chosen along routes to/from schools. This is an area where CVCCo would like to put some focus, once school resumes in the fall.

### 5.3 Ebikes

*Figure 7: Counts of ebikes, by hour of day*



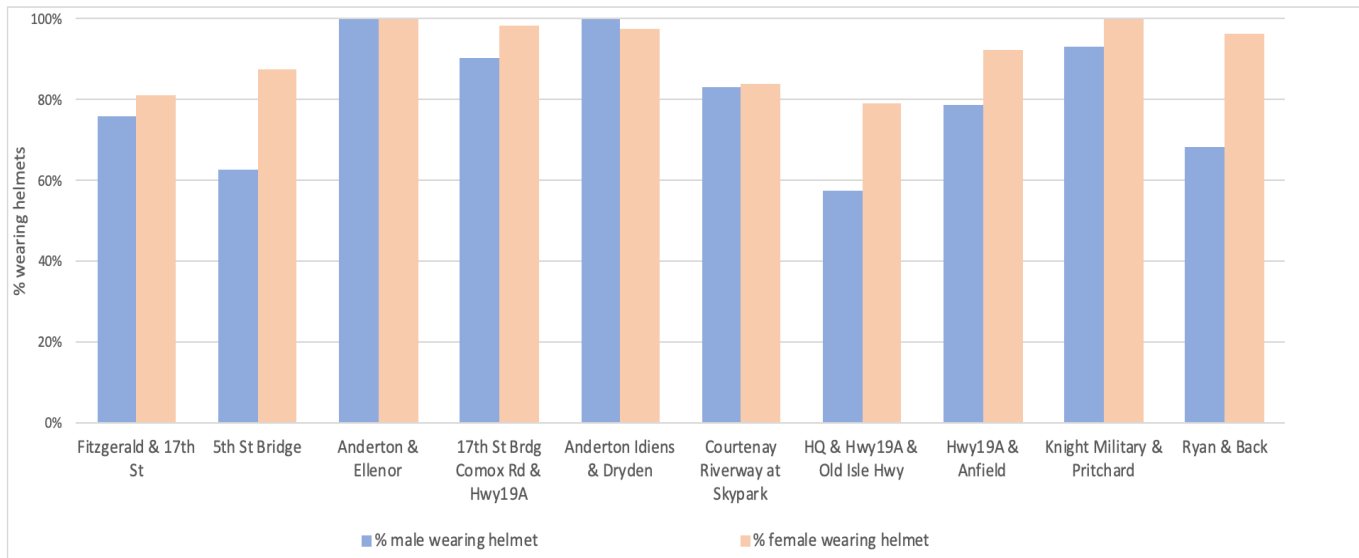
135 ebikes were coded, representing a significant 9% of cyclists counted. Although most volunteers said they were familiar with ebikes, no training was done to ensure volunteers would recognize a passing ebike. This likely resulted in some undercounting, particularly as volunteers also had to focus on a handful of rider characteristics for each cyclist.

Here are some other indications related to ebikes:

- The 2 bridges had the highest counts, each with 23. Next highest was *Knight Military & Pritchard*, followed by *Hwy 19A & Headquarters*. If we look instead at ebikes as a percentage of all counts, *Hwy 19A & Anfield* topped the list, followed by *Knight, Military & Pritchard*.
- The gender split on ebikes was roughly 60% male and 40% female
- Over 40% of ebikes were also coded as older riders (whereas ~20% of all cyclists were coded as older). Some might consider this interesting in terms of how low this % is, as many people assume ebikes are mostly for older riders. CVCCo may want to gather insights from some bike shops or ebike riders about this question.
- Ebikes can potentially move at higher speeds. A modest number of ebikes were coded as riding on sidewalks, notably on the 2 bridges.

## 5.4 Wearing helmets

Figure 8: % of cyclists wearing a helmet, by location



At the aggregate level, 1,246, or 80% of cyclists counted, were wearing a helmet. *Anderton & Ellenor* topped the list, with 100% of passing cyclists wearing helmets, with *Anderton, Idiens & Dryden* not far behind. *Hwy19A and Headquarters*, with 64% of riders wearing a helmet, was at the lower end of locations in terms of helmet use.

There was an interesting difference in helmet use between riders using the two bridges. 93% of riders over *17th Street Bridge* wore helmets vs 69% of those crossing *5<sup>th</sup> Street Bridge*. This may reflect that *17<sup>th</sup> Bridge* is more commonly used by commuters and those riding longer distances.

One can also see from *Figure 8* above that the rate of helmet use was higher among female riders at almost every location.

When we looked at riders coded as older, 94% (both genders) were also coded as wearing helmets.

## 5.5 Cyclists and left turn lanes

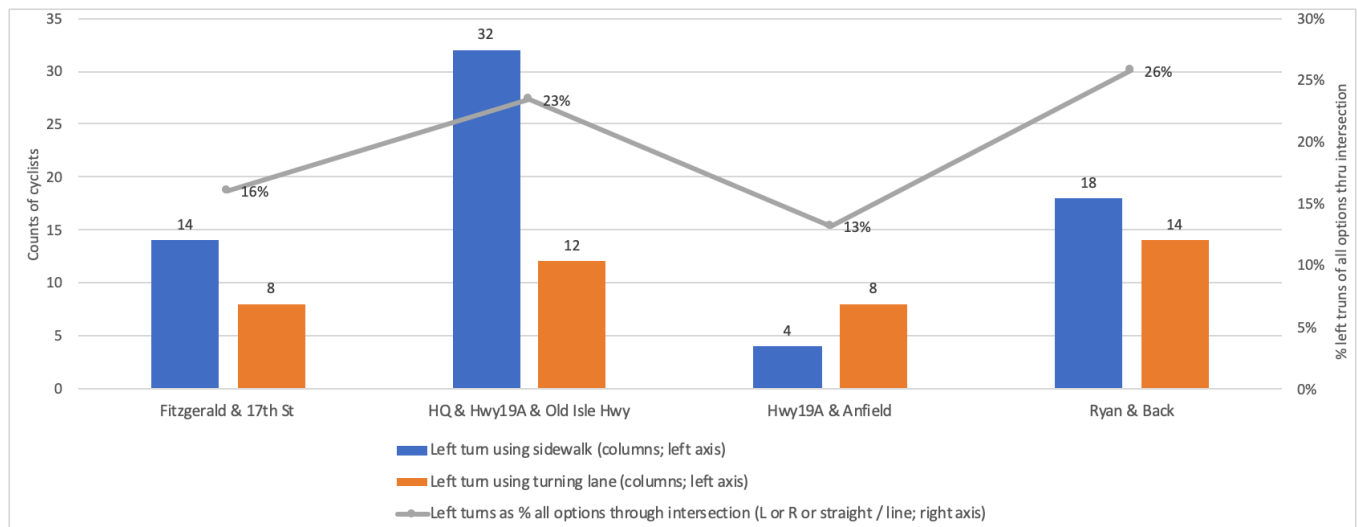
4 locations for the cyclist count were at busier intersections along arterial vehicle traffic routes, with left turn lanes for each incoming segment:

- Hwy 19A (south) & Anfield Road
- Fitzgerald Road & 17<sup>th</sup> Street
- Headquarters Road & Old Island Highway & Hwy 19A (north)
- Ryan Road & Back Road

Volunteers at these locations coded whether cyclists making left turns used the turning lane, or navigated across the intersection via sidewalks. Figure 9 below looks at just left turns from these 4 locations. The columns show how cyclists chose to navigate through the intersection, by sidewalk or by turning lane. The line presents left turns at each location as a percentage of all options used for passage through the intersection (left turn or right turn or straight through).

We believe it is mostly more confident cyclists who ride along these busy routes. However, the chart below shows that for three of the four intersections (Hwy19A & Anfield, with tiny counts, the exception), a clear majority of cyclists are not comfortable enough to use the left turning lane within the flow of traffic, and use sidewalks instead. This may reflect a lack of confidence in the intersection designs.

Figure 9: Counts of cyclists using left turn lanes vs sidewalks



An additional left turn of note to some cyclists is coming onto 17<sup>th</sup> Street Bridge from Dyke/Comox Road to the SE. There are 2 left turn lanes, with a through lane (straight onto Hwy19A bypass) to the right. Cyclists using a left turn lane must cross the right lane through traffic to get into position for the turn onto the bridge. Skilled cyclists ensure they take the middle of the lane so they do not get pinched between traffic on both sides. But not all cyclists are so confident (for volunteer insight on this turn, see the report on the [17<sup>th</sup> Street Bridge & Comox Road](#) counting station).

## 5.6 How cyclists choose to cross the bridges

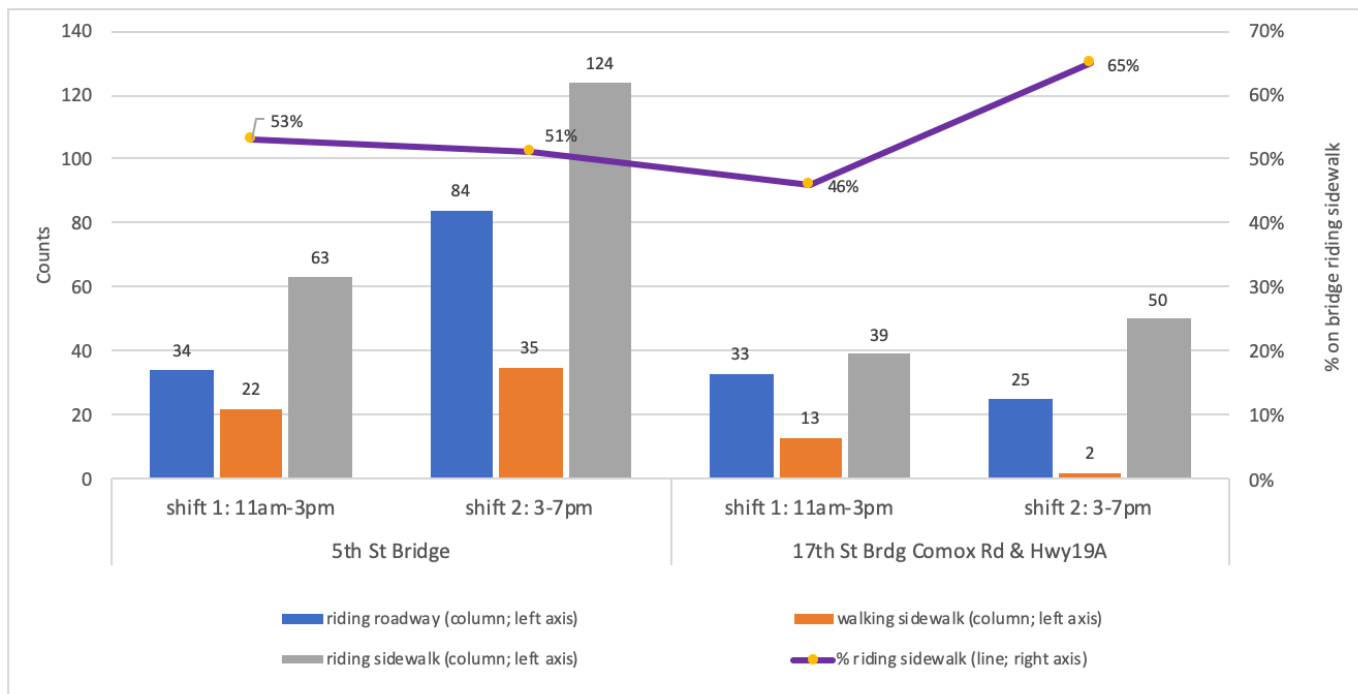
We segregated data for the 2 bridges across the Courtenay River, and looked at how cyclists crossed these bridges. We were interested to see whether they chose to ride on the bridge roadway, or whether they used the sidewalks: and, if they used the sidewalks, did they ride or walk across?

Here's what we found (see *Figure 10*, below):

- The majority of riders chose to cross a bridge on a sidewalk
- When we look only at riders who used a sidewalk, a high majority of these chose to ride vs walk across the bridge. 77% of cyclists crossing *5<sup>th</sup> Street Bridge* on a sidewalk chose to ride. 86% of cyclists crossing *17<sup>th</sup> Street Bridge* on a sidewalk chose to ride

In the chart following, the columns show counts of cyclists, by how they crossed, summarized by shift, for each bridge. The chart also shows (purple line) the percentage of cyclists crossing the bridge who chose to ride on a sidewalk.

*Figure 10: How cyclists cross the bridges, by shift*



In [Section 3](#), issues with crossing *5<sup>th</sup> Street Bridge* on the sidewalks were noted. For more detailed information, along with volunteer insights, see also the location report for [5<sup>th</sup> Street Bridge](#).

Cyclists riding on roadways vs sidewalks were also tracked at other locations. This data was modest in scope and of limited value. This was partly as pathway use was expected in some locations, such as the Riverway. At the *Pritchard & Knight & Military Row* roundabout, cyclist use of sidewalks was appropriate. At *HQ & Hwy 19A & the Old Isle Hwy*, there is a dirt pathway (recorded on forms like a sidewalk) off the road in the NW quadrant, that was used by many cyclists (see photo following):

*Figure 11: Offroad pathway (off left side of Old Isle Hwy) approaching Hwy19A & Headquarters & Old Highway*





## 6. SUMMARY REPORTS ON COUNTING LOCATIONS

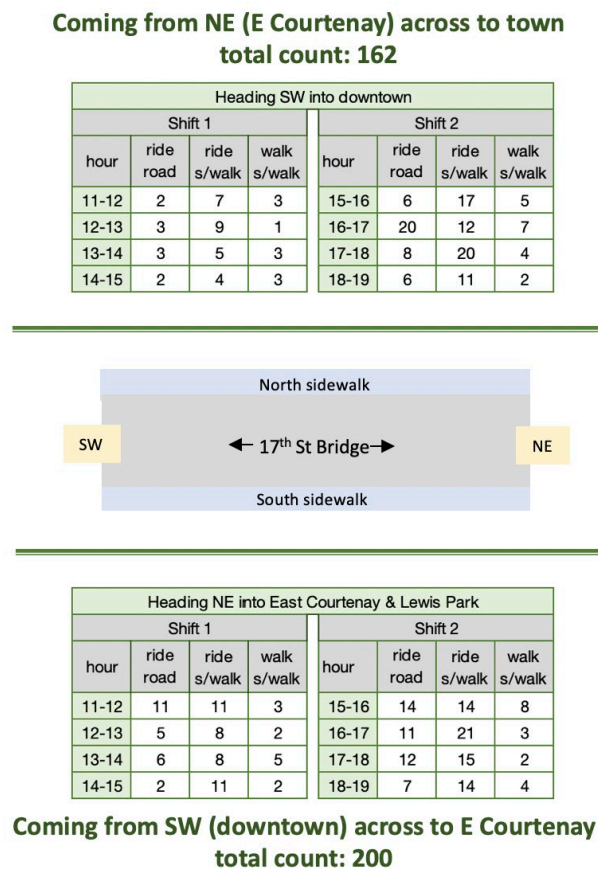
### 6.1 5<sup>th</sup> Street Bridge (total count - 362)

By a significant margin, this was the site with the highest counts of cyclists. In the second shift counts were notably high (see *Figure 12* below).

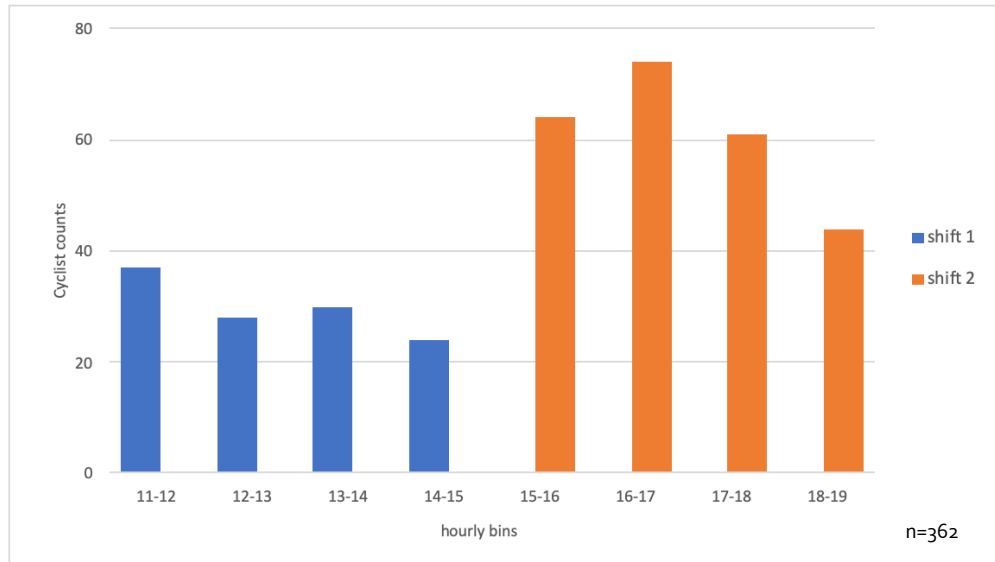
Note that the layout below captures whether cyclists crossing the bridge rode on the roadway or took a sidewalk: and, if they took a sidewalk, whether they rode or walked their bikes. Similar tracking was done for 17<sup>th</sup> Street Bridge.

The City of Courtenay has approved a scheduled upgrade for 5<sup>th</sup> Street Bridge, which includes plans to improve the sidewalks.

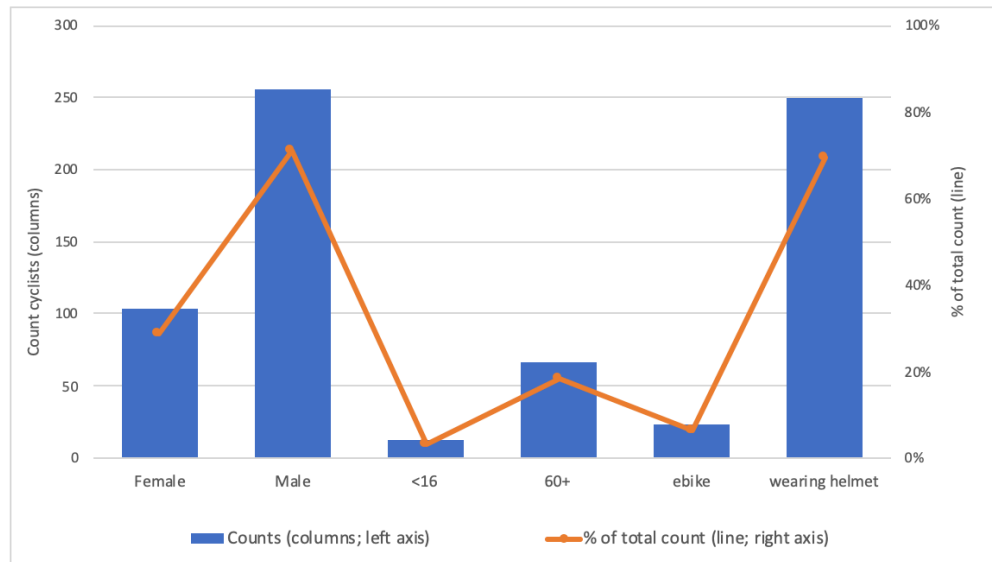
*Figure 12: 5<sup>th</sup> St Bridge - location layout & counts by hour*



In *Figure 13* below, one can see a spike in cyclist traffic from ~3pm to 6pm. This includes a commuting group, but also many others. It would be useful in future to track pedestrian and mobility scooter traffic by hour.

Figure 13: 5<sup>th</sup> St Bridge – Summary counts by hourFigure 14: 5<sup>th</sup> St Bridge – other cycling characteristics

These characteristics often required that quick, subjective determinations be coded by volunteer counters. Some numbers should be viewed as general indications.



- Slightly under 20% of riders over 5<sup>th</sup> Street Bridge were coded as older. Over 80% of these were also coded as male
- Over 5% of riders were coded for ebikes, with nearly 60% of these coded as female. Over one-third of ebike riders were also coded as older
- 70% of riders were coded as wearing helmets. Of those not wearing helmets, nearly 90% were male. Of those coded as older, 90% were coded as wearing helmets

For many Comox Valley cyclists, whether on a recreational or utilitarian ride, crossing the Courtenay River can be unavoidable. For casual recreationists, the need to cross one of the downtown bridges may dissuade them from choosing to cycle.

*5<sup>th</sup> Street Bridge* is not only necessary for cyclists, it is also, as this report has highlighted, extremely busy. Here are factors making this a highly complex crossing:

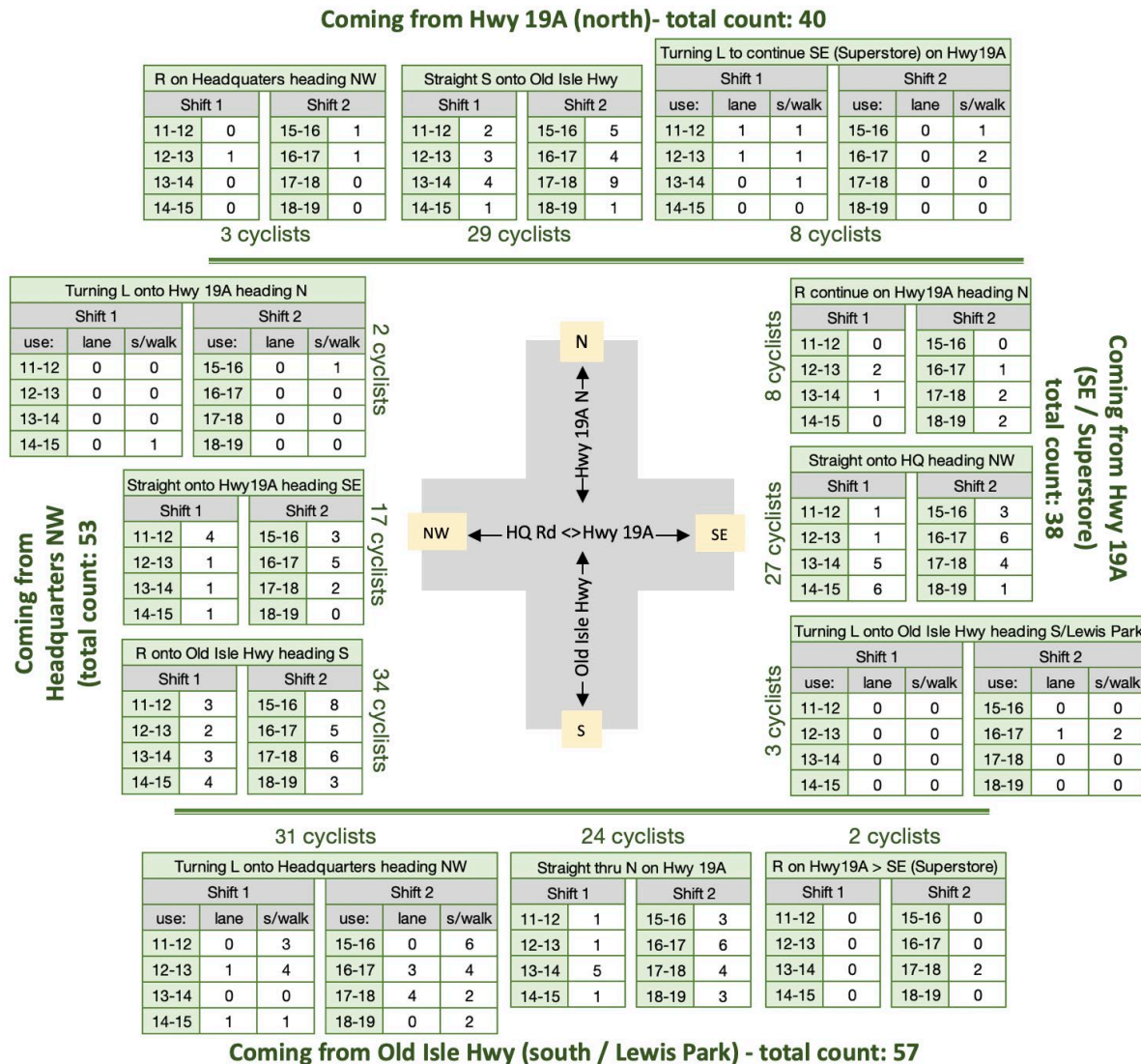
- narrower sidewalks & narrow vehicle lanes
- significant pedestrian traffic on the sidewalks (we did not count pedestrians, but anecdotal volunteer reports were consistent on this)
- a significant number of motorized mobility scooters (again, anecdotally reported). There were also skateboard and scooter users (some motorized)
- most cyclists choose to cross the bridge on a sidewalk, and a high majority of cyclists taking a sidewalk choose to ride
- many cyclists ride *5<sup>th</sup> Street Bridge* sidewalks on the side of the bridge against the flow of traffic. So, 2-way cyclist traffic on a single narrow sidewalk is not uncommon
- many cyclists continue on a sidewalk after the bridge, sometimes at high speed, particularly on the east side, where there is no ease-down (ramp) back onto the roadway for cyclists
- when planning long term improvements on *5<sup>th</sup> Street Bridge*, one assumes there will be increases of both vehicle and active transportation

As the vehicle lanes across *5<sup>th</sup> Street Bridge* are narrow, riding across the bridge on the roadway can be nerve-wracking, and it is likely (and advisable) that only experienced cyclists choose this option. If cyclists do not 'take their lane', they run the risk of aggressive drivers passing them from behind, even in the face of oncoming traffic, leaving cyclists with dangerously little space on either side. There are anecdotal stories of impatient drivers blaring their horns in repeated or prolonged fashion when cyclists do 'take the lane'.

## 6.2 Headquarters Rd & Hwy 19A (north) & Old Island Hwy (total count: 188)

Many cyclists coming to or from this location were riding a route that also included 5<sup>th</sup> Street Bridge. Significant sidewalk counts are partly because there is a parallel dirt path in the NW corner of this intersection (see Figure 11).

Figure 15: HQ & Hwy19A & Old Isle Hwy – road segments to & from, & counts by hour



In Figure 16 following, we can see a sharp increase in cyclist traffic between 3pm and 6pm, similar to that seen for 5<sup>th</sup> Street Bridge.

Figure 16: Headquarters &amp; Hwy19A &amp; Old Isle Hwy – Summary counts by hour

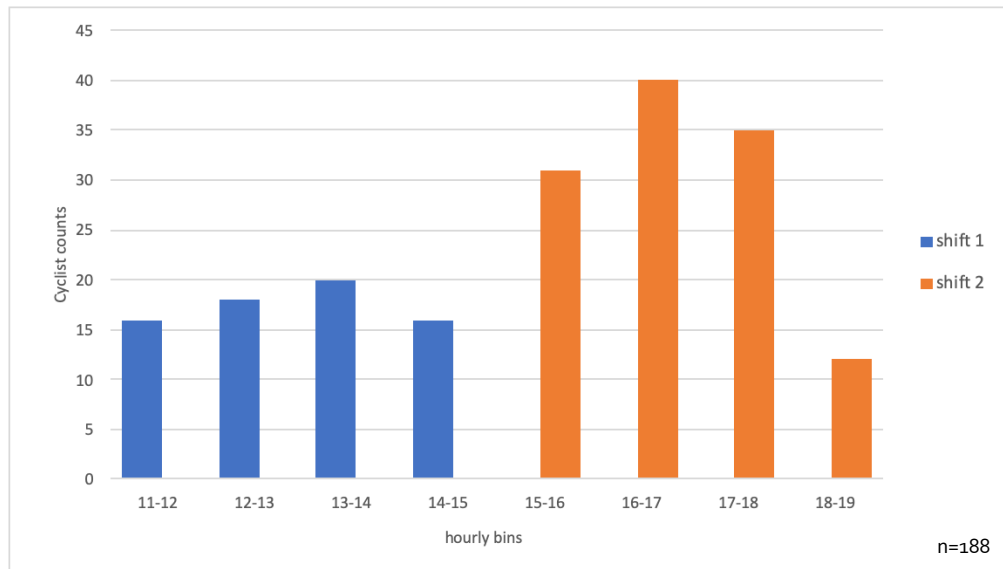
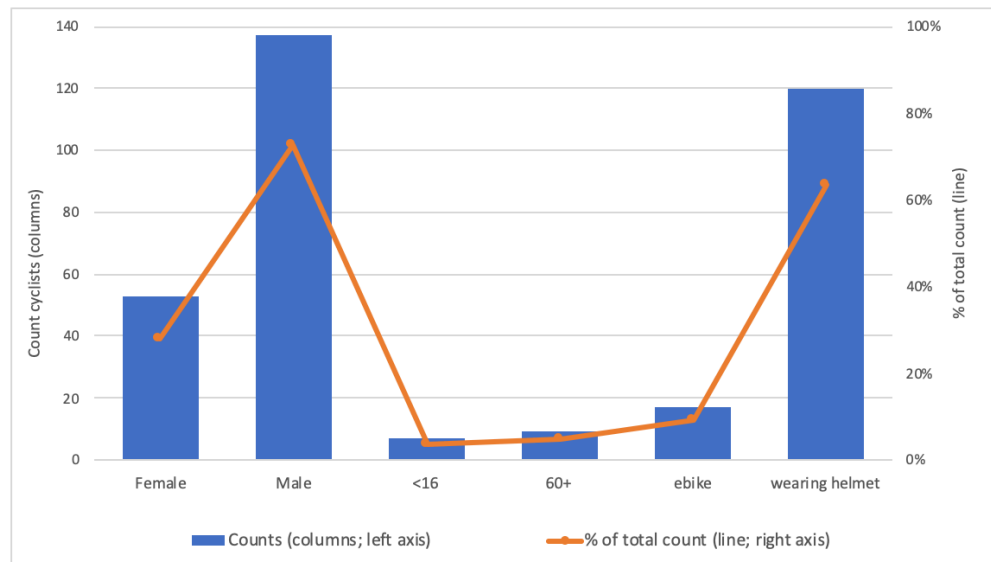


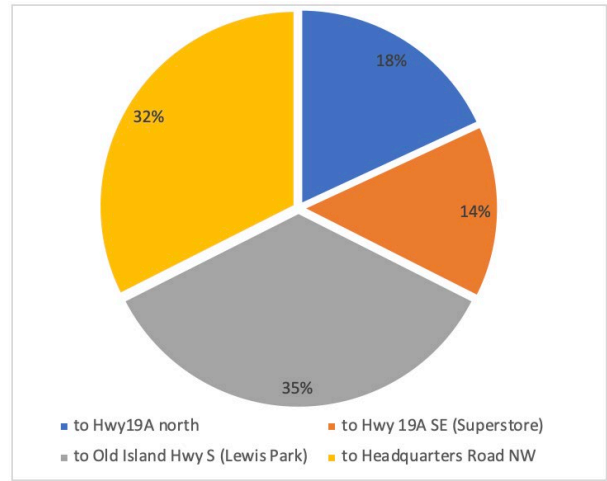
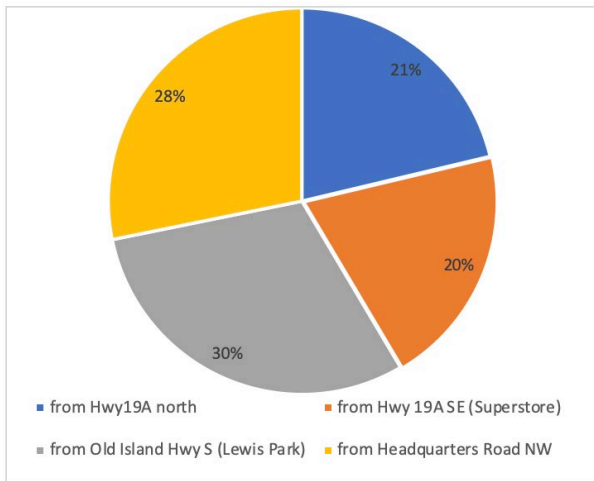
Figure 17: Headquarters &amp; Hwy19A &amp; Old Isle Hwy – other cycling characteristics

These characteristics often required that quick, subjective determinations be coded by volunteer counters. These numbers should be viewed as general indications.



- Under 10% of riders were coded as older, with almost 90% of these also coded as male
- ~10% of riders were coded for ebikes; roughly 60% of these were also coded as male
- Over 60% of riders wore helmets (the lowest percentage of any location). Of those coded as not wearing helmets, over 80% were coded as male

Figure 18: Cyclist traffic into (left) and out from (right) HQ &amp; Hwy19A &amp; Old Isle Hwy, by road segments



The pie chart above on the left shows the % of total counts by the road segment along which cyclists entered the intersection at *Headquarters & Hwy 19A & the Old Island Highway*. The pie chart to the right shows the road segment along which cyclists left the intersection. Most cyclist traffic through this location proceeded along either the Old Island Highway in the direction of Lewis Park (35%) or branched NW to follow Headquarters Road (32%).

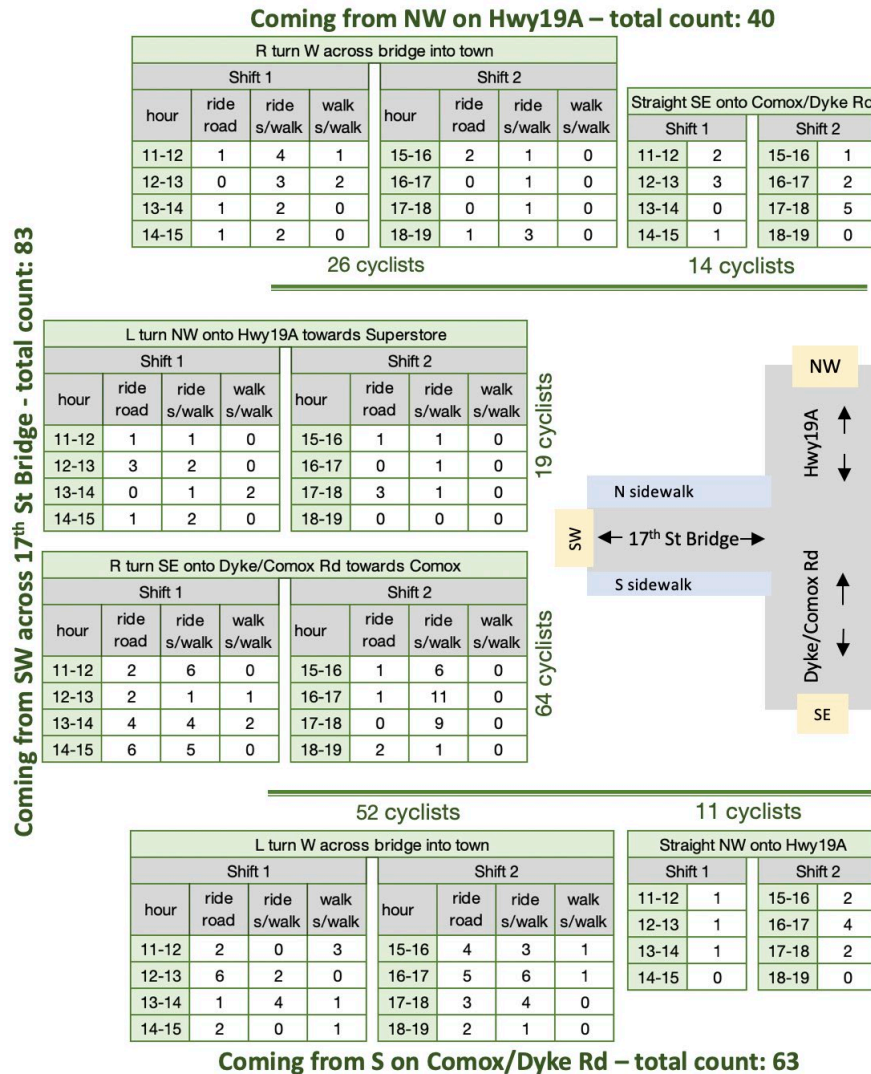


### 6.3 17<sup>th</sup> Street Bridge & Comox Road (total count - 187)

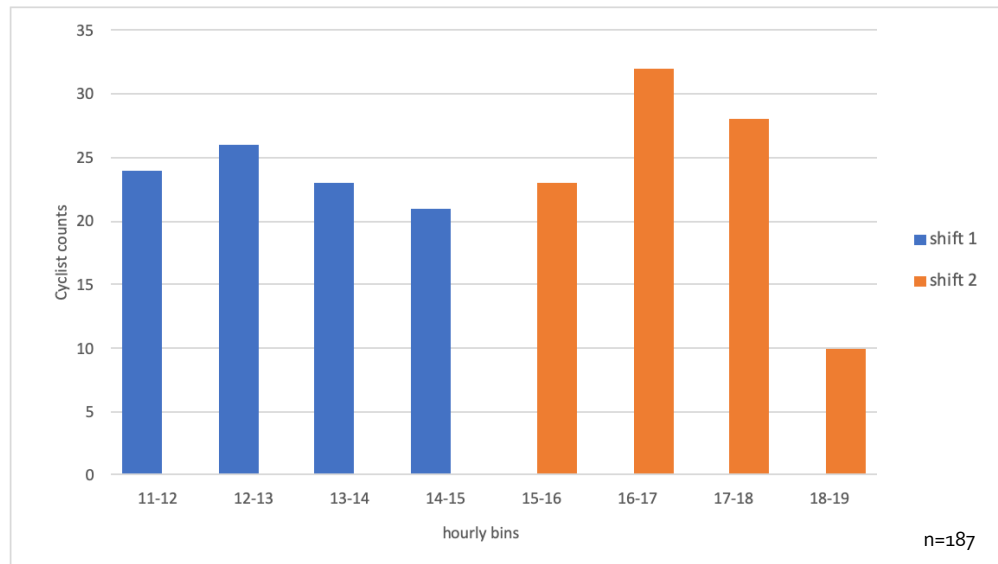
This counting station was at the east end of the bridge in order to capture how cyclists came to or proceeded from the bridge on the east side.

The layout below captures whether cyclists crossing the bridge rode on the roadway or took a sidewalk: and, if they took a sidewalk, whether they rode or walked their bikes. Similar tracking was done for 5<sup>th</sup> Street Bridge.

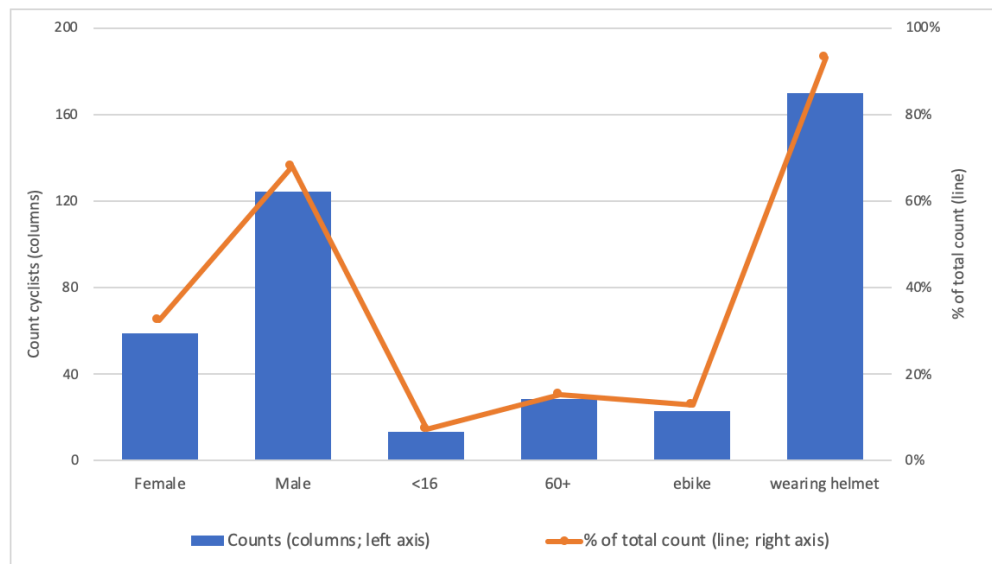
Figure 19: 17<sup>th</sup> Street Bridge & Comox Road – road segments to & from, & counts by hour



In Figure 17 below, we can see rough consistency of hourly counts between the 11am start of counting, and 6pm, with counts trailing off in the final hour. Between 4pm and 6pm we may be seeing evidence of a commuting cohort.

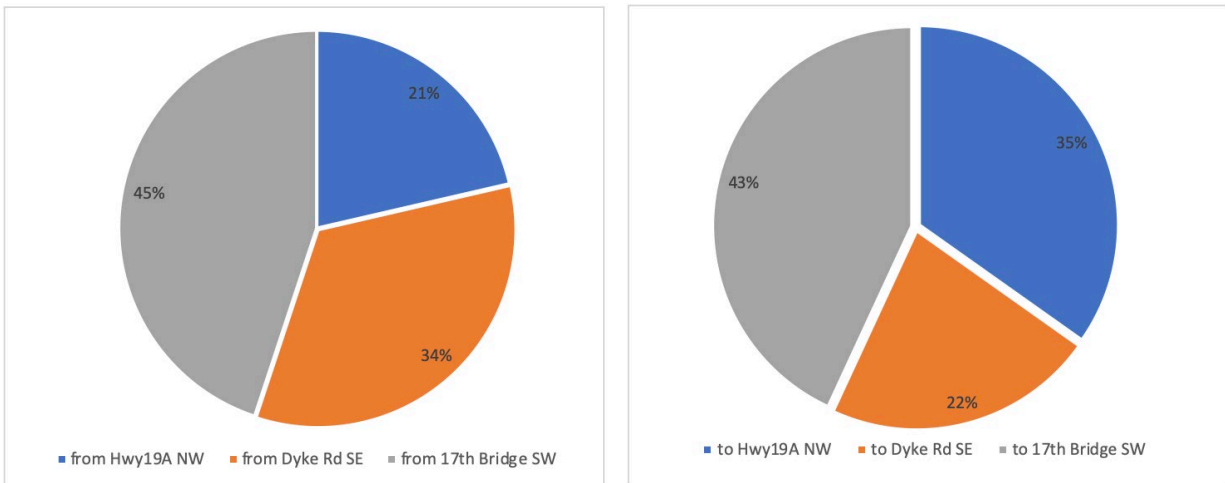
Figure 20: 17<sup>th</sup> Street Bridge & Comox Road – Summary counts by hourFigure 21: 17<sup>th</sup> St Bridge & Comox Rd – other cycling characteristics

These characteristics often required that quick, subjective determinations be coded by volunteer counters. These numbers should be viewed as general indications.



- Roughly 15% of riders were coded as older. Over 80% of these were coded male
- Over 10% of riders were coded for ebikes, with nearly three-quarters of these also coded as male. Over one-third of ebike riders were also coded as older
- Over 90% of riders were coded as wearing helmets. Of those coded as not wearing helmets, over 80% were male

Figure 22: Cyclist traffic into (left) and out from (right) 17<sup>th</sup> St Bridge & Comox Rd, by road segments



The chart to the left above shows that the highest portion of riders came to our location from the SW across 17<sup>th</sup> Street Bridge. Not surprisingly, that is also the route the highest volume of cyclists took when leaving the junction. Significantly more cyclists left onwards to the NW than entered from the NW. This may reflect that we did not capture cyclists during the early day commute.

As discussed in [Section 5.5](#), the left turn onto 17<sup>th</sup> Street Bridge for cyclists coming along Comox Road from the SE has a 'reputation'. There are 2 left turn lanes, and a cyclist must cross the often busy right lane (which goes straight north onto Hwy19A bypass) to get into the centre turn lane. If a cyclist does not 'take the lane' they run the risk of getting squeezed between traffic to both sides.

Following are comments on how cyclists navigated this left turn onto the bridge, provided by the count volunteers:

- From Warren & Dee McDonald (early shift, 11am to 3pm):  
*... probably an equal number of cyclists actually used the roadway by maneuvering into the turning lanes to cross the bridge on the road surface as did the number crossing the road and using the southbound shoulder and side walk surface to negotiate the bridge.*
- From Marg Harris (2<sup>nd</sup> shift, 3pm to 7pm):  
*... We observed a few cyclists who approached the bridge from the Dyke road on the wrong (west) side of Dyke Road which enabled them to easily go up the ramp onto the south sidewalk to cross the bridge ... it was not possible to observe when or how they got themselves across Dyke Road .... prior to the bridge. The majority of the cyclists moved into the right-hand L turn lane prior to crossing the bridge using shoulder checks and signals.*

As we see in the preceding comment, cyclists were noted approaching the bridge along Dyke Road on the wrong (west) side of the road. This is a potential hazard, because: 1) they have to cross Dyke Road at some point, and 2) this can lead to cyclists riding one shoulder in both directions.

## 6.4 Courtenay Riverway at Skypark (total count - 186)

This counting station focused on cyclist traffic on the Riverway. It was adjacent to Mansfield Road to the west, but cyclists on Mansfield were not counted unless they entered onto or departed from the Riverway.

Figure 23: Courtenay Riverway at Skypark – road segments to & from, & counts by hour

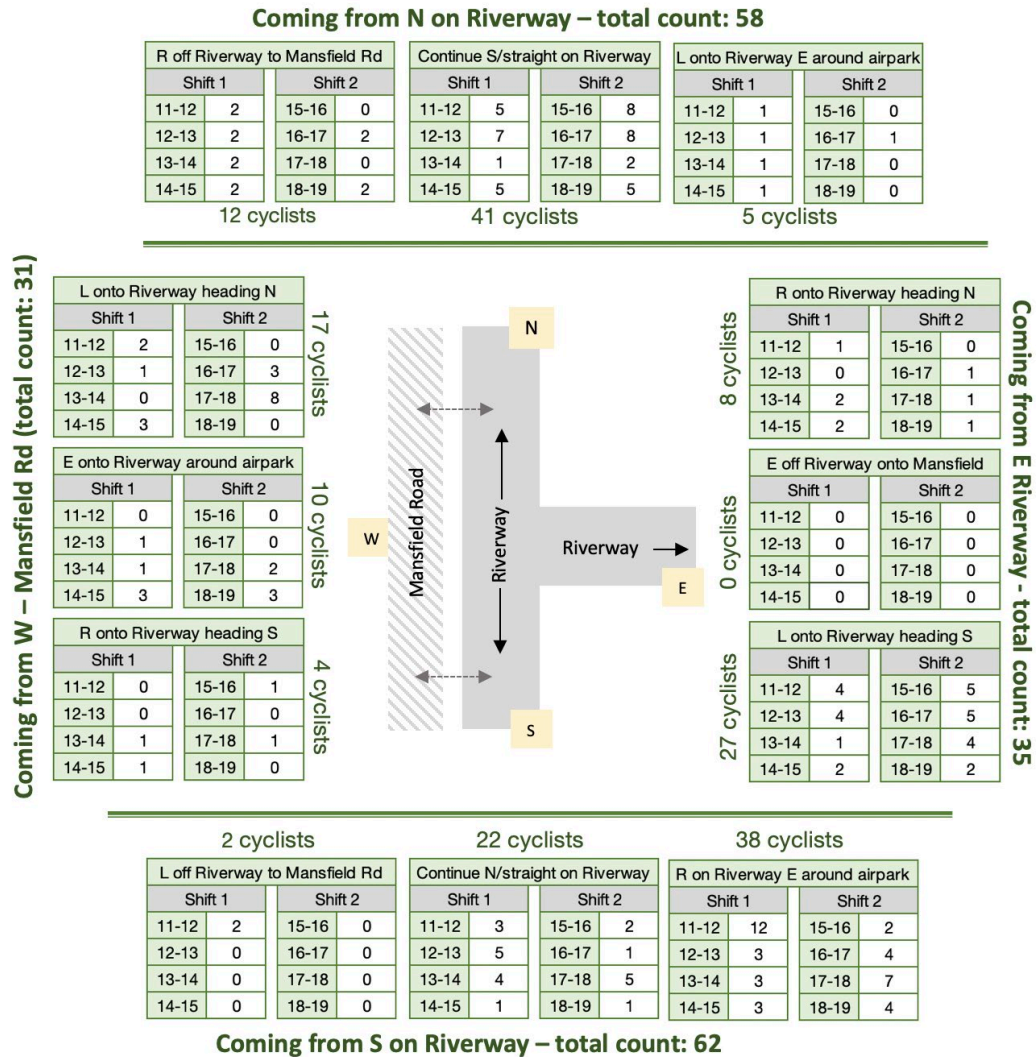
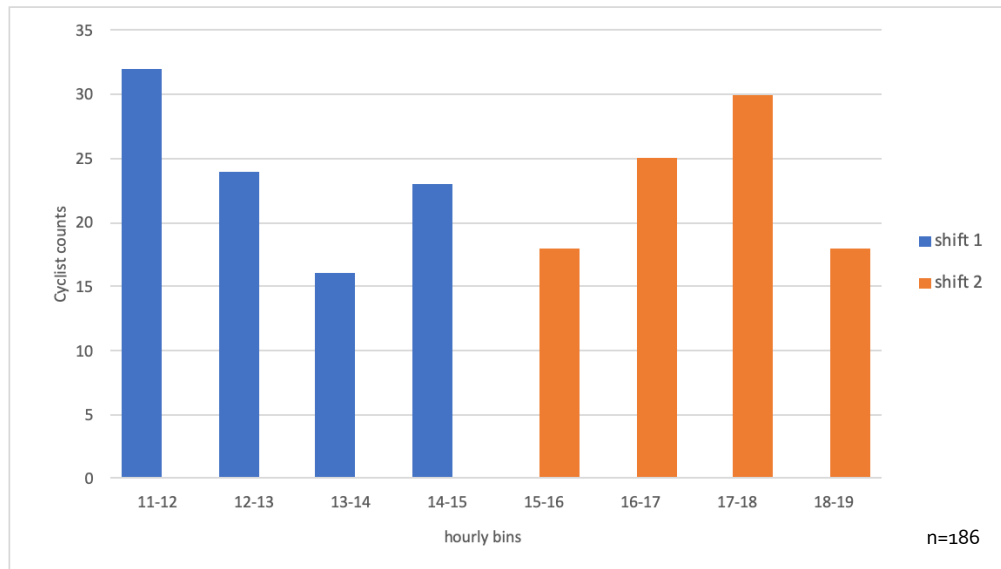


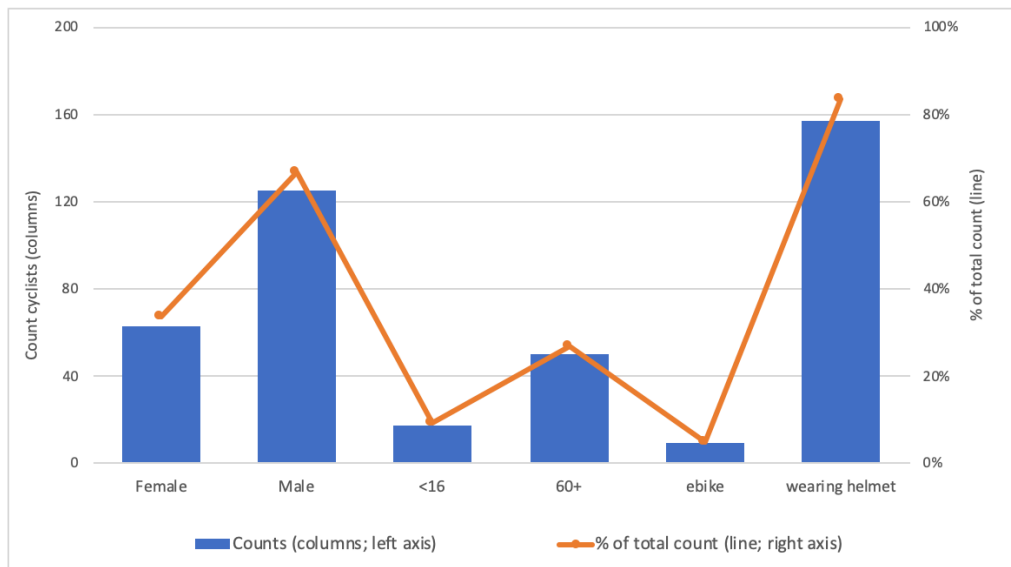
Figure 24: Courtenay Riverway &amp; Skypark – Summary counts by hour



The high counts between 11am and 12 noon, followed by a drop-off, suggests there may have been a morning recreational commute out on the Riverway that we caught the tail end of.

Figure 25: Courtenay Riverway &amp; Skypark – other cycling characteristics

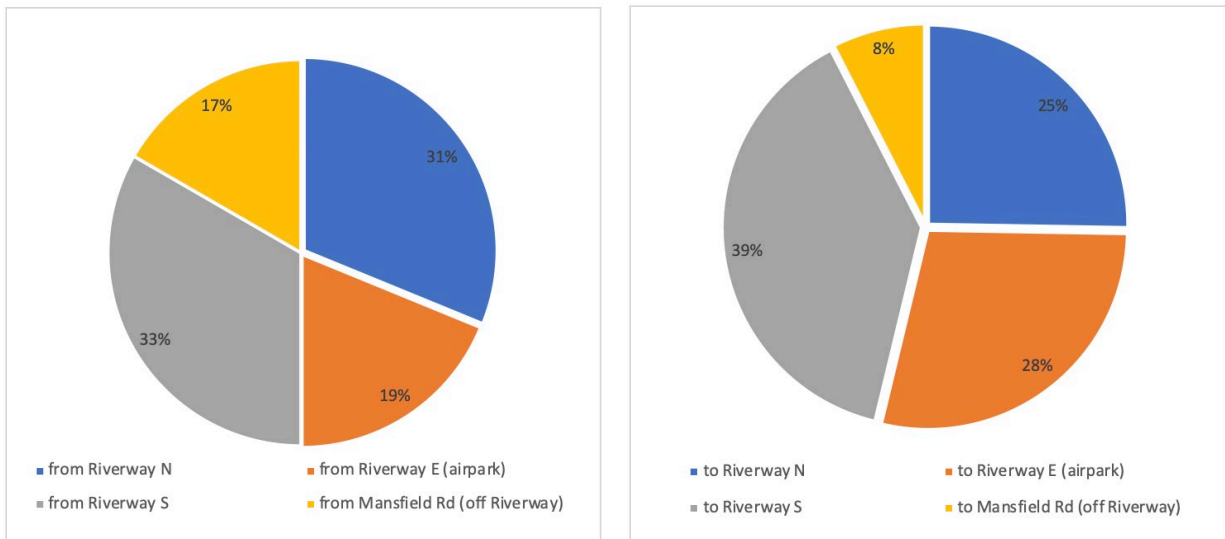
These characteristics often required that quick, subjective determinations be coded by volunteer counters. These numbers should be viewed as general indications.



- Approaching 30% of riders were older. Nearly 70% of these were coded as male
- Roughly 5% of riders were coded for ebikes, with around two-thirds of these also coded as male
- Nearly 85% of riders were coded as wearing helmets. Of riders not wearing helmets, around two-thirds were male. Over 90% of older riders were coded as wearing helmets.



Figure 26: Cyclist traffic into (left) and out from (right) Courtenay Riverway & Skypark, by pathway segments



Whenever pedestrians and cyclists share pathways, there can be risks of contention. Joyce from the first counting shift (11am to 3pm), shared the following observation:

.... We found the cyclists to be extremely tolerant of poor pedestrian pathway behavior. Bells were used twice .... Other than that, the cyclists just rode around groups that were in wrong lanes and or extended over the entire pathway....

Mike partnered with Joyce on the 1st shift. He shared the insights and photo below:

.... the south vehicle entrance to the air park empties right across the ped/cycle pathway and ... it was relatively well used (I would guess a dozen cars coming or going over the four hours). The photo below is taken looking out from the air park gate. Some vehicles came out slowly but others zipped out pretty fast (remote control gate) and there is a chance of a very bad interaction with pathway users if someone is not paying attention.

Possible calming improvements could include signage stop signs for vehicles or warning signage for pathway users? At the very least, the path should be painted so it is noticeable across the driveway (green like cycle paths on roadways?).

Figure 27: Photo of south vehicle entrance to airpark crossing the ped/cycle pathway





## 6.5 Fitzgerald Ave & 17<sup>th</sup> Street (total count - 137)

Fitzgerald is a north <> south bike lane in downtown Courtenay. Currently, it has limited use as part of destination rides as it does not connect to onward routes at either end: that should change in coming months as a new Bike BC grant will enable the bike lane to be extended north to 5<sup>th</sup> Street (Complete Streets route) and further south to the malls.

Both intersecting streets are arterial routes. 17<sup>th</sup> Street is a natural route to or from nearby 17<sup>th</sup> Street Bridge over the Courtenay River to the NE. Volunteers tracked whether cyclists turning left used the left turn lanes or the sidewalks to navigate their left turn.

Figure 28: Fitzgerald Ave & 17<sup>th</sup> Street – road segments to & from, & counts by hour

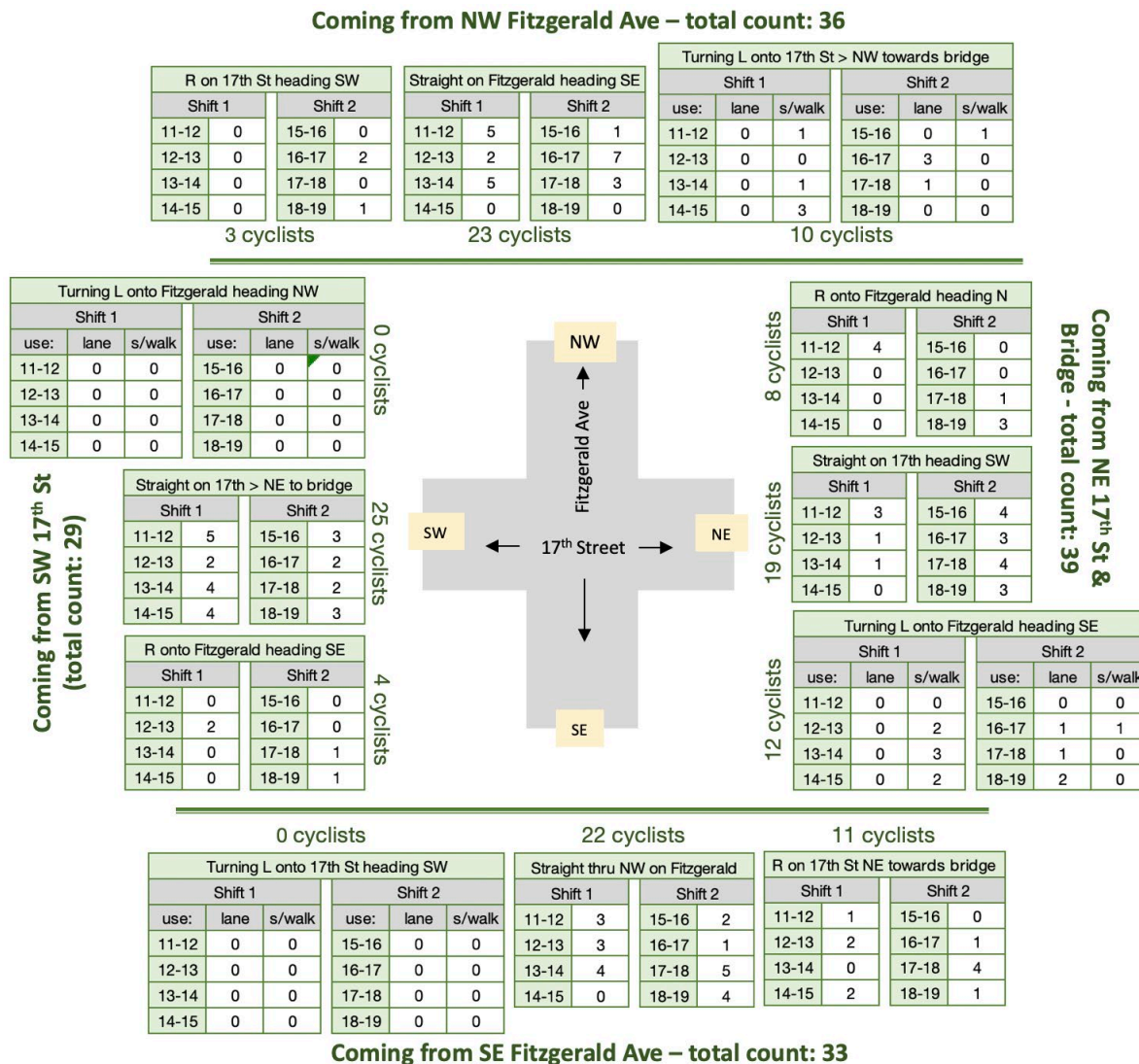
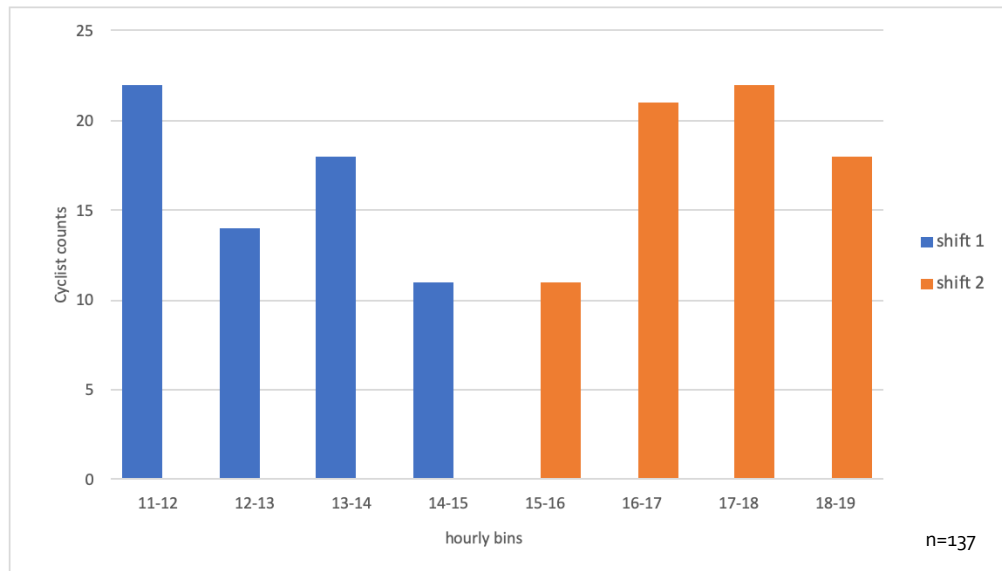
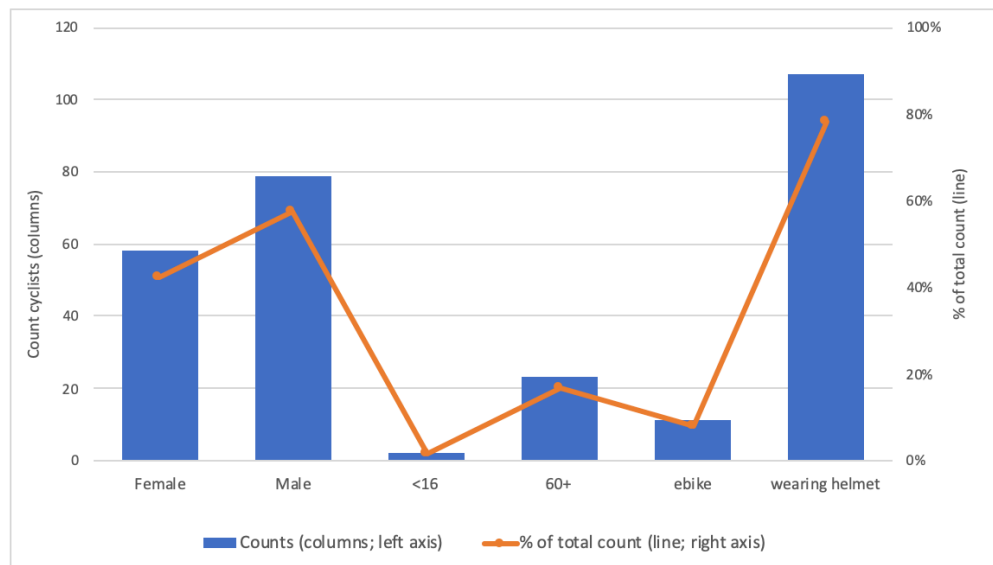


Figure 29: Fitzgerald Ave & 17<sup>th</sup> Street – Summary counts by hour

Interesting to see the 11 to 12 noon counts above. The higher counts between 4 and 6pm may reflect a commuting cohort.

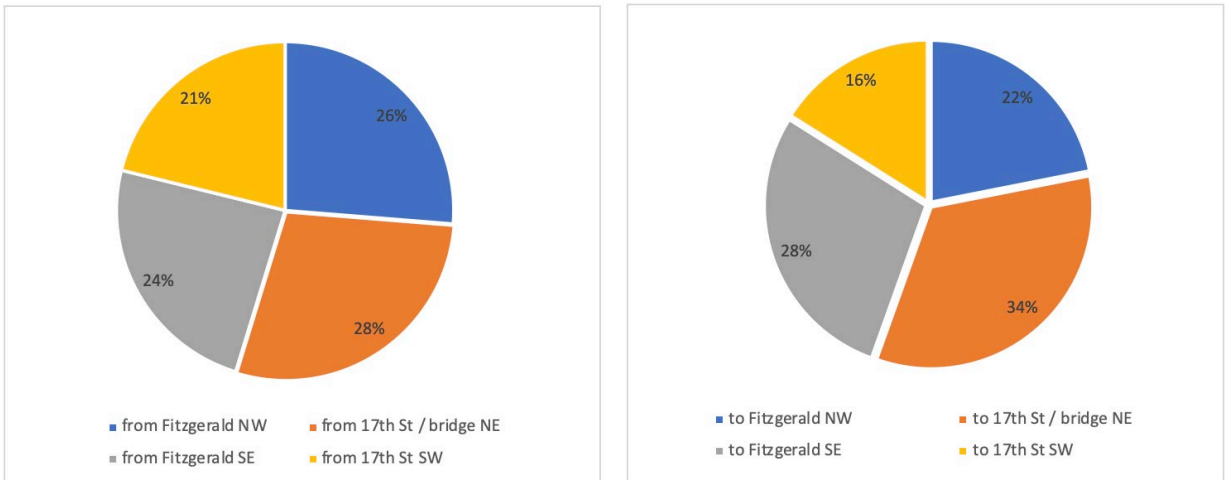
Figure 30: Fitzgerald Ave & 17<sup>th</sup> Street – other cycling characteristics

These characteristics often required that quick, subjective determinations be coded by volunteer counters. These numbers should be viewed as general indications.



- Under 20% of riders were coded as older, with nearly three-quarters of these also coded as male
- ~10% of riders were coded for ebikes; over 90% of these were also coded as male
- Nearly 80% of riders were coded as wearing helmets. Of those without helmets, over 60% were coded as male

Figure 31: Cyclist traffic into (left) and out from (right) Fitzgerald Ave & 17<sup>th</sup> Street, by road segments



The highest volumes (34%) leaving from this intersection headed NE to 17<sup>th</sup> St Bridge (not surprisingly). It would be interesting to see whether this would be different were we to track the morning commute.

## 6.6 Knight Rd & Pritchard Rd & Military Row (total count - 133)

This location was unique for the June 13 counting initiative in that it has a traffic roundabout. It also had sidewalks cyclists could choose to use: most conveniently, if they were taking the immediate right at the junction.

This location hoped to get a sense of a few things. First, recreational riders who pass the airport before looping around. Second, possible commuters from CFB Comox. Finally, whether cyclists are using Knight Road heading W from this junction towards Anderton: this is on some cycling route plans, but can be an iffy road due to traffic and the absence of shoulders.

Figure 32: Knight & Pritchard & Military – road segments to & from, & counts by hour

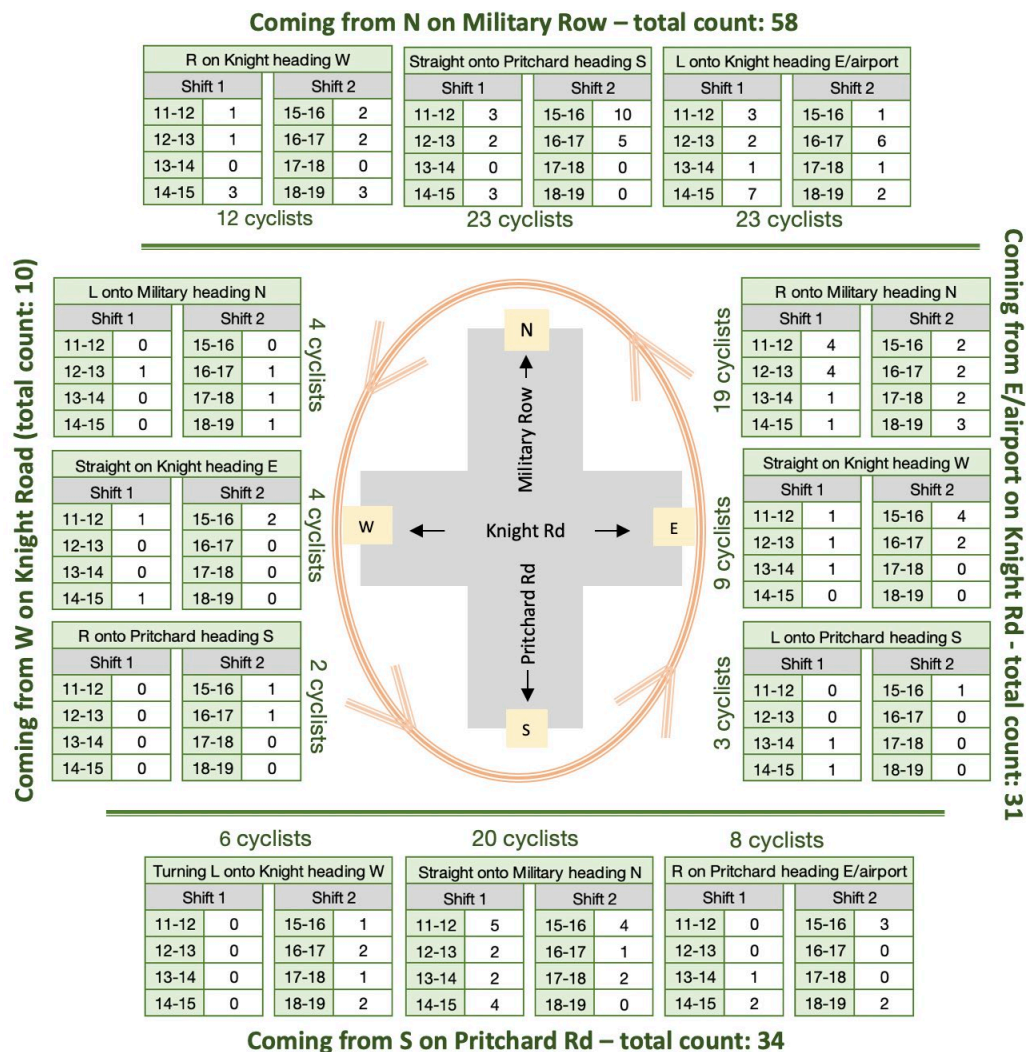
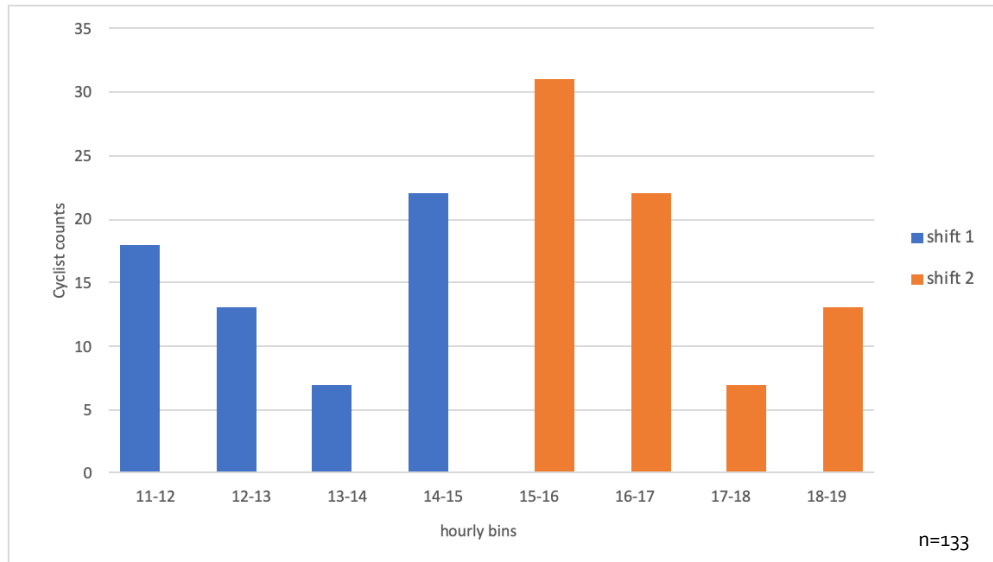


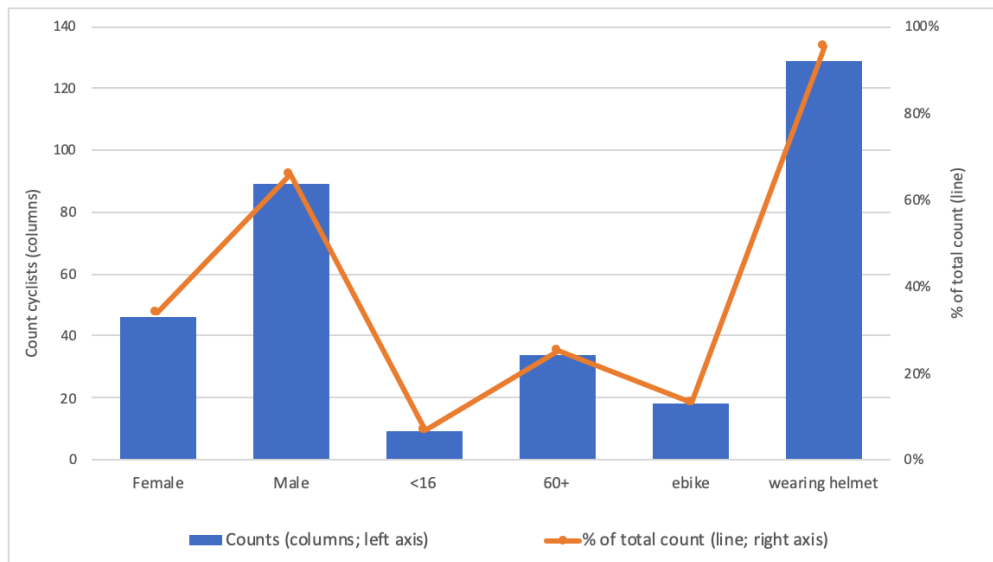
Figure 33: Knight &amp; Pritchard &amp; Military – Summary counts by hour



Peak counts above were between 2pm and 5pm. This seems to be an early start time for a return commuter group: perhaps shifts at CFB Comox finish early in the afternoon?

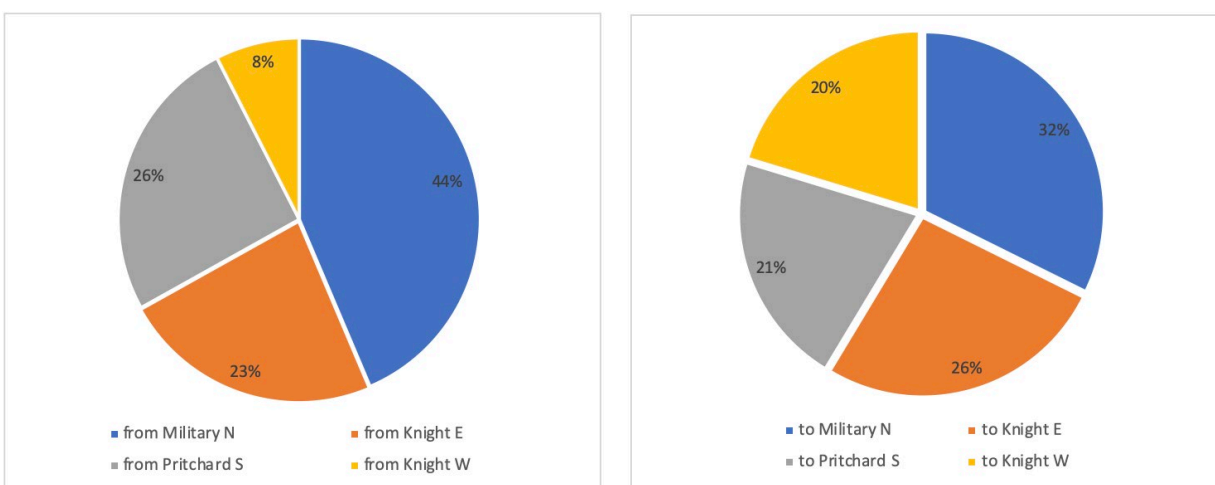
Figure 34: Knight &amp; Pritchard &amp; Military – other cycling characteristics

These characteristics often required that quick, subjective determinations be coded by volunteer counters. These numbers should be viewed as general indications.



- Around 25% of riders were coded as older, with around two-thirds of these also coded as male
- Over 10% of riders were coded for ebikes; roughly 60% of these were also coded male. Of riders coded for ebikes, approximately 60% were also coded as older
- Over 95% of riders wore helmets.

Figure 35: Cyclist traffic into (left) and out from (right) Knight & Pritchard & Military, by road segments



The highest volumes (44%) arriving at this location came along Military Row from the north. Military Row was also the most popular route option for cyclists continuing onwards from this location. This may result partly from the airforce base, and may also reflect a popular recreational riding loop.



## 6.7 Ryan Road & Back Road (total count - 124)

Ryan and Back is the junction of several arterial routes. There are left turn lanes, and left turning cyclists were tracked to see whether they used the turning lanes, or the sidewalks. There was interest to see if many cyclists chose to ride up Ryan Road hill. With North Island College up the hill, there was interest in whether a commuting group would show up.

Figure 36: Ryan Road & Back Road – road segments to & from, & counts by hour

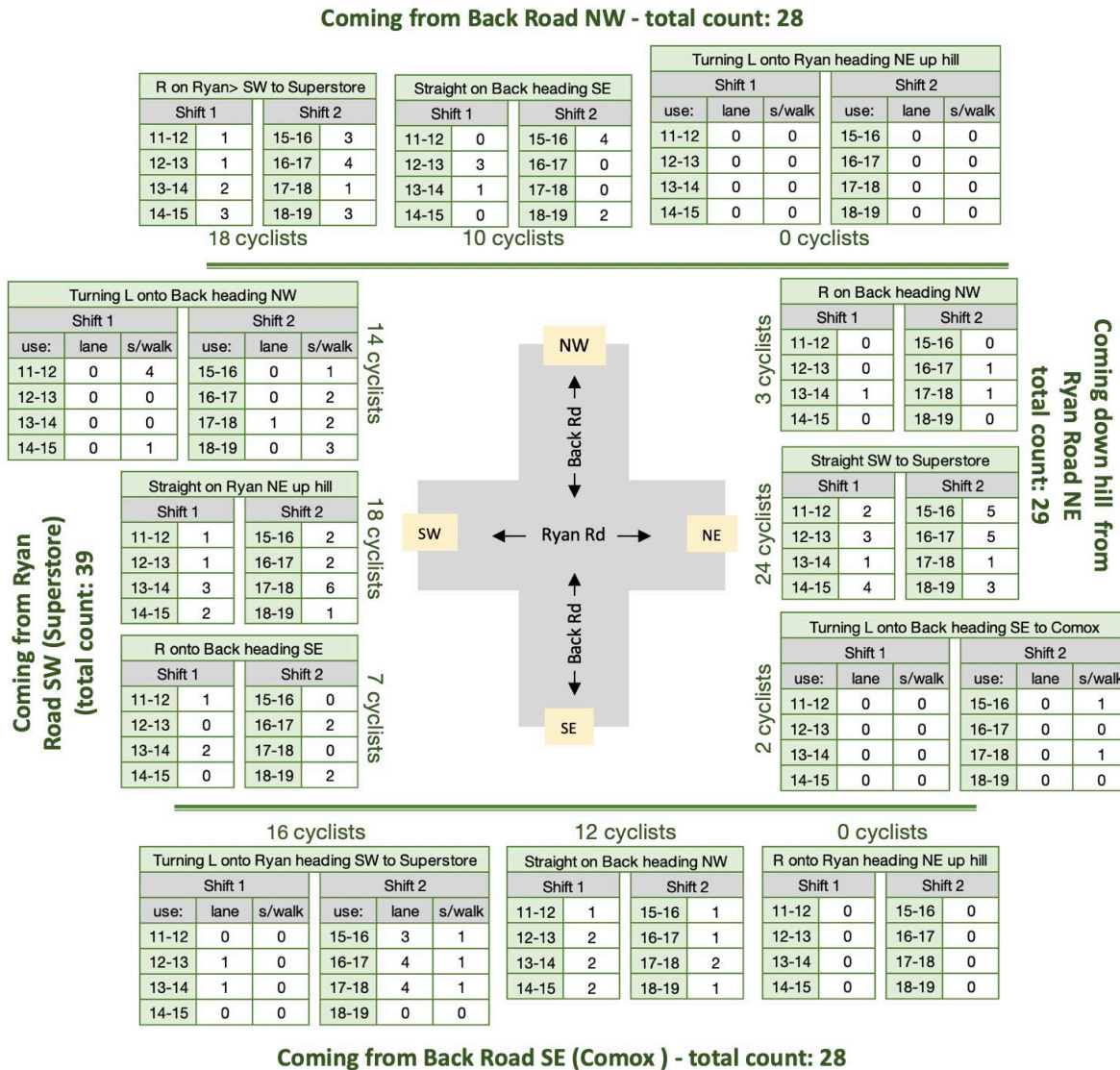
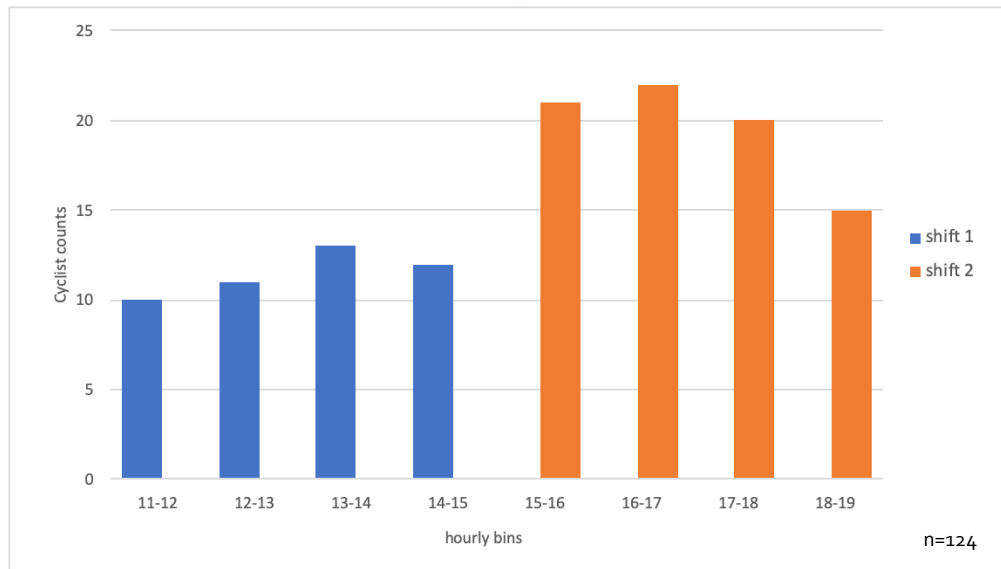


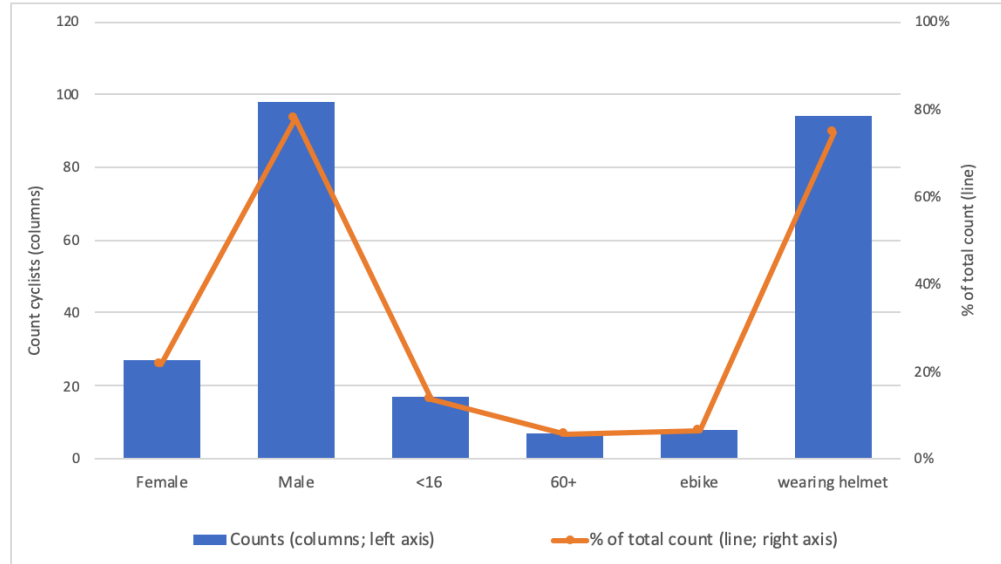
Figure 37: Ryan Road &amp; Back Road – Summary counts by hour



Quite a jump above between 2pm to 3pm vs 3pm to 6pm, which likely reflects commuting cyclists.

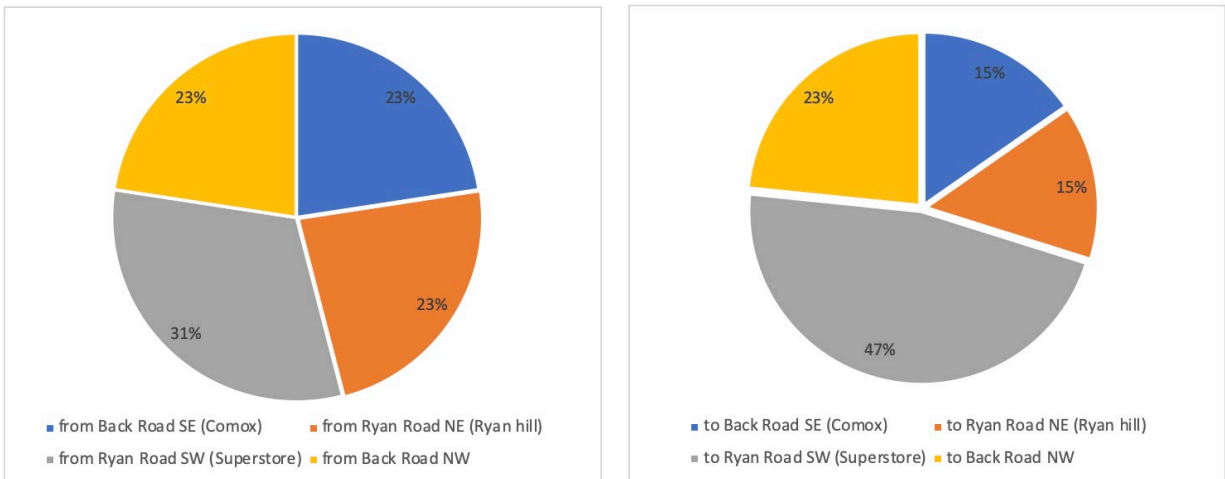
Figure 38: Ryan Road &amp; Back Road – other cycling characteristics

These characteristics often required that quick, subjective determinations be coded by volunteer counters. These numbers should be viewed as general indications.



- Under 10% of riders were coded as older, roughly split between male and female
- Under 10% of riders were coded for ebikes, roughly split between male and female
- Three-quarters of riders were wearing helmets. Of the modest number without helmets, over 90% were male

Figure 39: Cyclist traffic into (left) and out from (right) Ryan Road & Back Road, by road segments



SW along Ryan Road towards Courtenay town and the Superstore was (not surprisingly) the most commonly taken segment (almost 50%) out from this intersection.

## 6.8 Hwy 19A (south) & Anfield Avenue (total count - 91)

There was a desire to track cyclist traffic coming from or heading south out of Courtenay. Hwy19A, the old coastal highway, is also called Cliffe Road as it gets into Courtenay. There are left turn lanes, and left turning cyclists were tracked to see whether they used the turning lanes, or the sidewalks.

Some cyclists heading south may have been missed from these counts as they continued closer to the seaside along the Riverway (no longer paved) for a further stretch to the end of the trail at Millard Road.

Figure 40: Hwy 19A & Anfield Ave – road segments to & from, & counts by hour

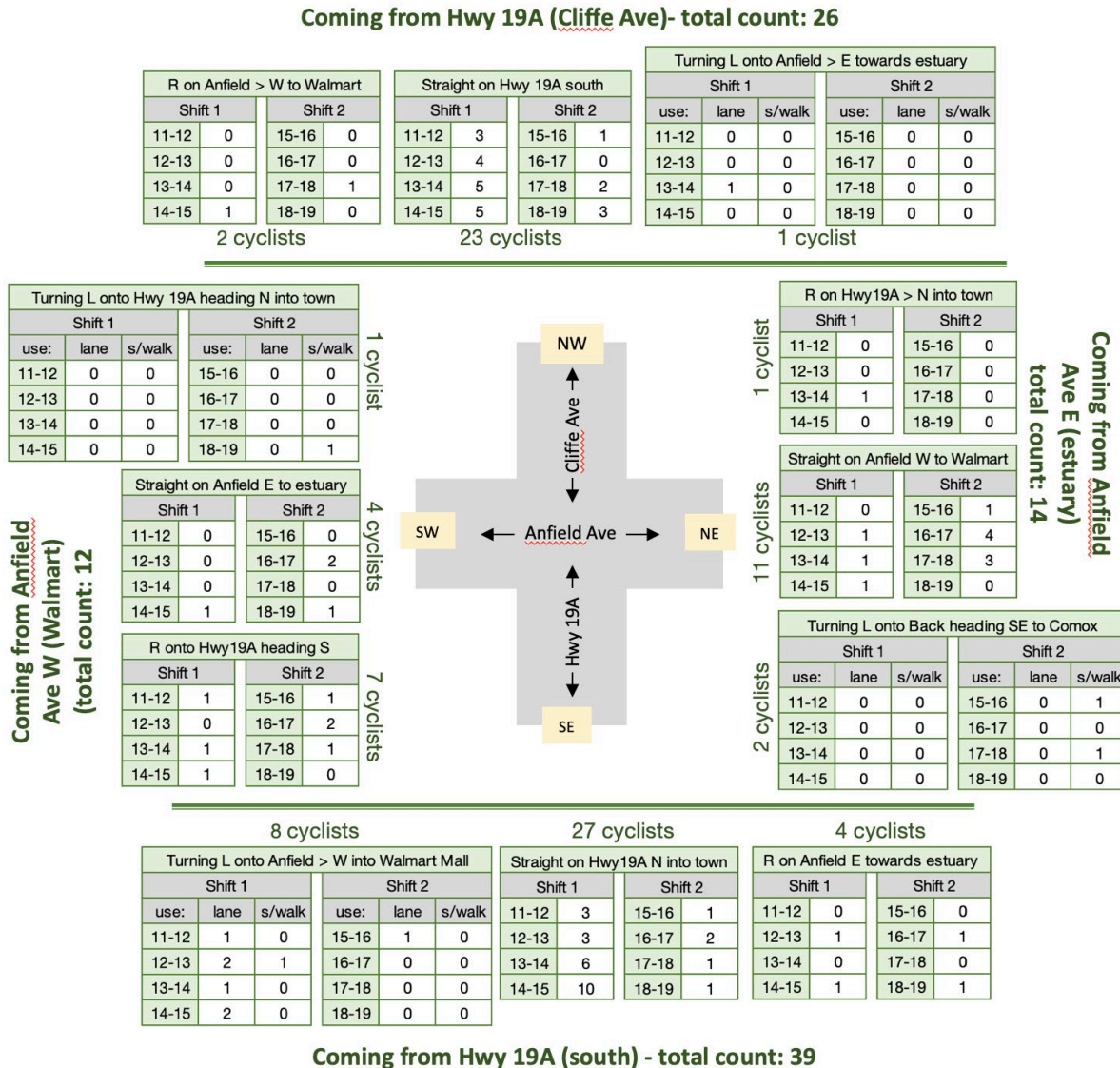
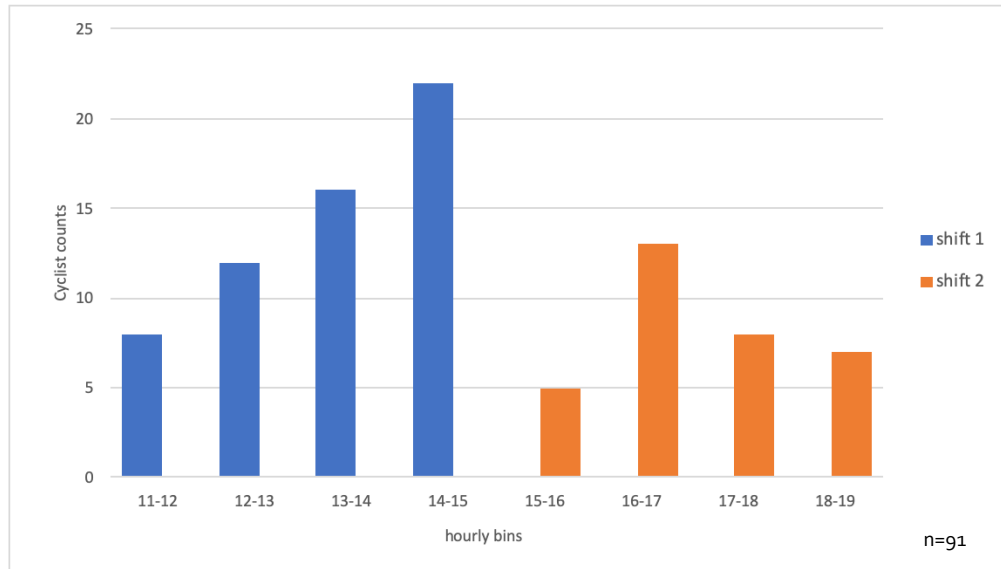


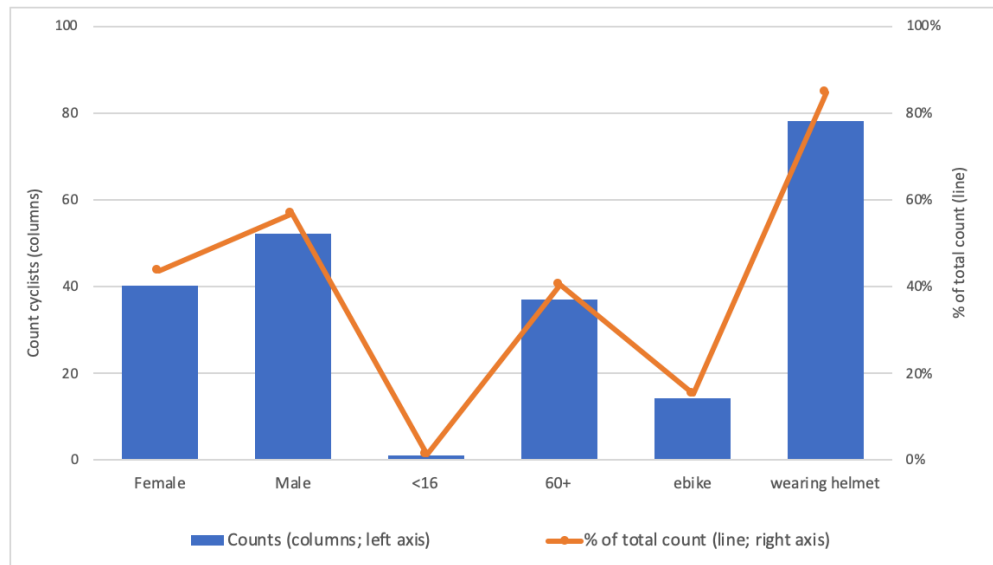
Figure 41: Hwy 19A &amp; Anfield Ave – Summary counts by hour



An intriguing pattern above. There did not seem to be a commuting group heading south out of town during the latter part of the day. (See volunteer comments at the end of this section.)

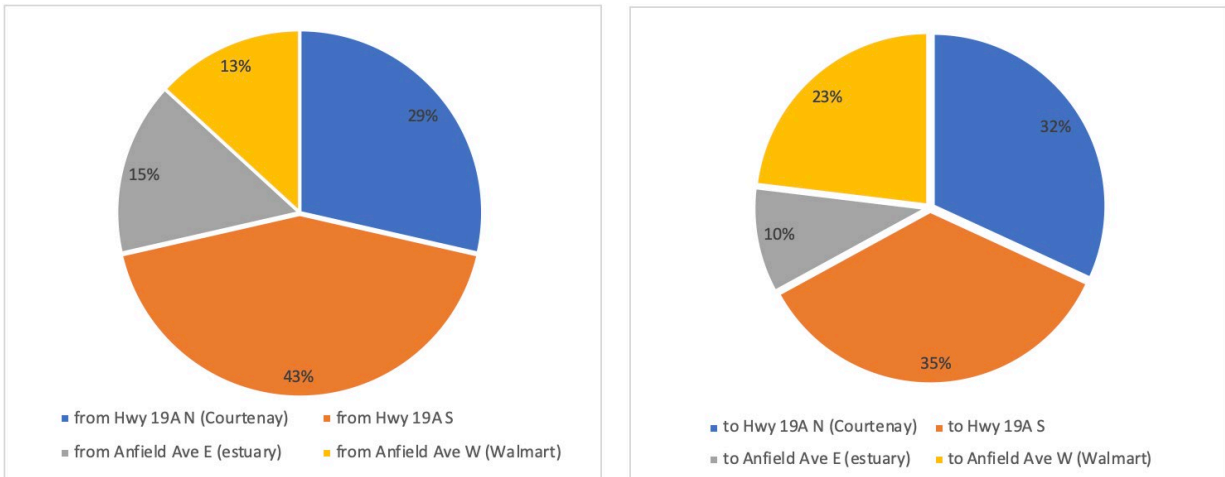
Figure 42: Hwy 19A &amp; Anfield Ave – other cycling characteristics

These characteristics often required that quick, subjective determinations be coded by volunteer counters. These numbers should be viewed as general indications.



- ~40% of riders were coded as older, with slightly more of these coded as females vs males
- ~15% of riders were coded for ebikes; roughly 2/3 of these were also coded as female. Of those coded for ebikes, close to 90% were also coded as older
- ~85% of riders were wearing helmets; of those not wearing helmets, nearly 80% were also coded as male. 80% of those coded as older were wearing helmets.

Figure 43: Cyclist traffic into (left) and out from (right) Hwy 19A &amp; Anfield Ave, by road segments



The largest percentage of cyclists arriving at this location were coming from the south along Hwy19A. Heading south was also the most common route for cyclists proceeding onwards after passing through this location, though heading north on Hwy19A was not far behind.

Following are insights from Andrea Lang who was a volunteer counter on the first shift (11am to 3pm) at this location:

.... Based on my experience travelling into town (I live between Union Bay and Royston) I would say the numbers and types of riders were fairly typical, but didn't capture any of the rec/fitness groups that you see at least weekly riding south.... I know there are a few commuters but probably not alot, and who knows what their schedules could be ....

In the summer the number of touring people I see on the highway seems to be increasing every year.

.... the recreational (both serious and leisurely) riders were probably the majority... the ones with panniers (not touring) were probably on errands into town. So combining fitness, recreation and purpose! The ones without helmets were I think using bikes for transport.

The number of different ways that people navigated through the intersection showed how the sidewalks and crosswalks are used in surprising combinations.



## 6.9 Anderton Rd & Idiens Way & Dryden Rd (total count - 86)

There was interest to see cyclist volumes along both Anderton and Idiens. CVCCo has been monitoring plans for a route that would continue east from Idiens towards the base, and these numbers may support advocacy for this potential route.

As Dryden Road ends with a dead end just east off Anderton, little cyclist traffic along the Dryden segment was expected.

Figure 44: Anderton Rd & Idiens Way & Dryden Rd – road segments to & from, & counts by hour

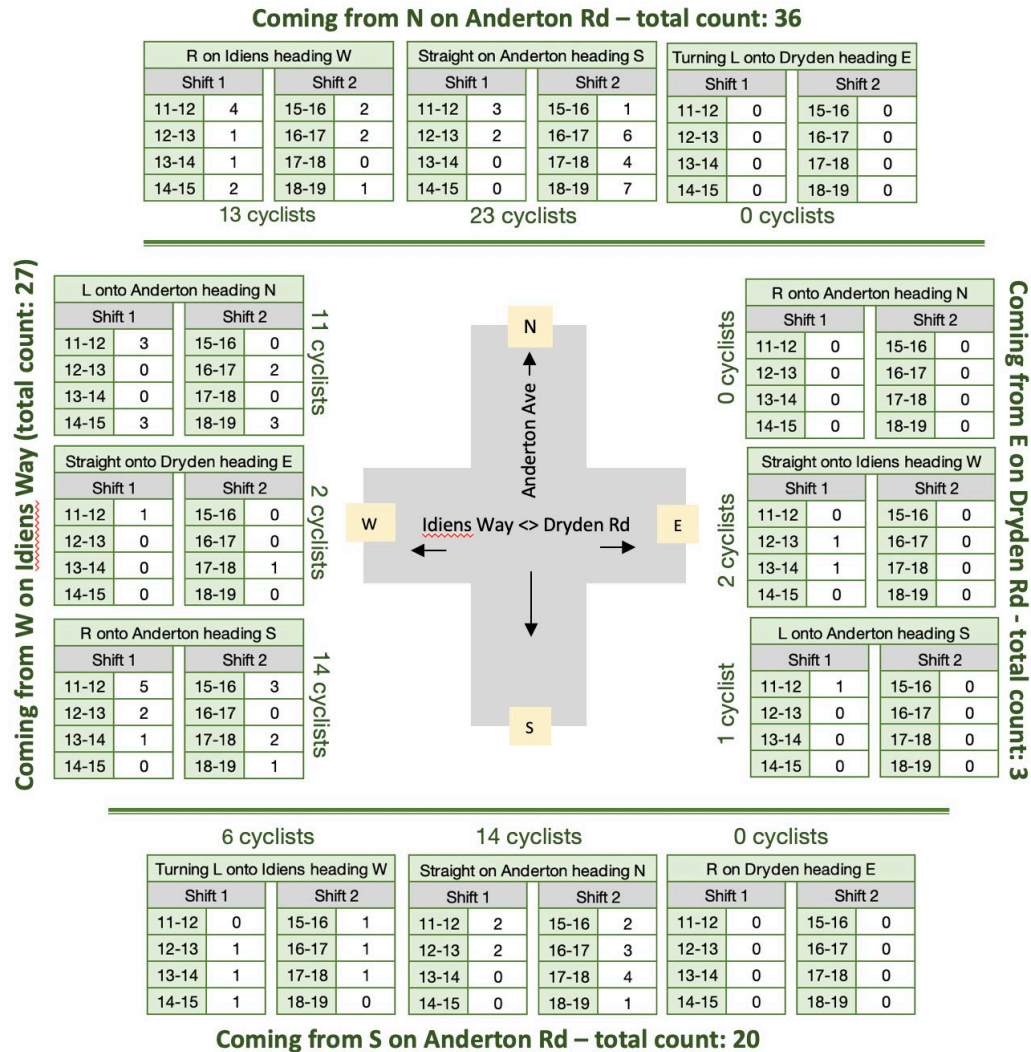
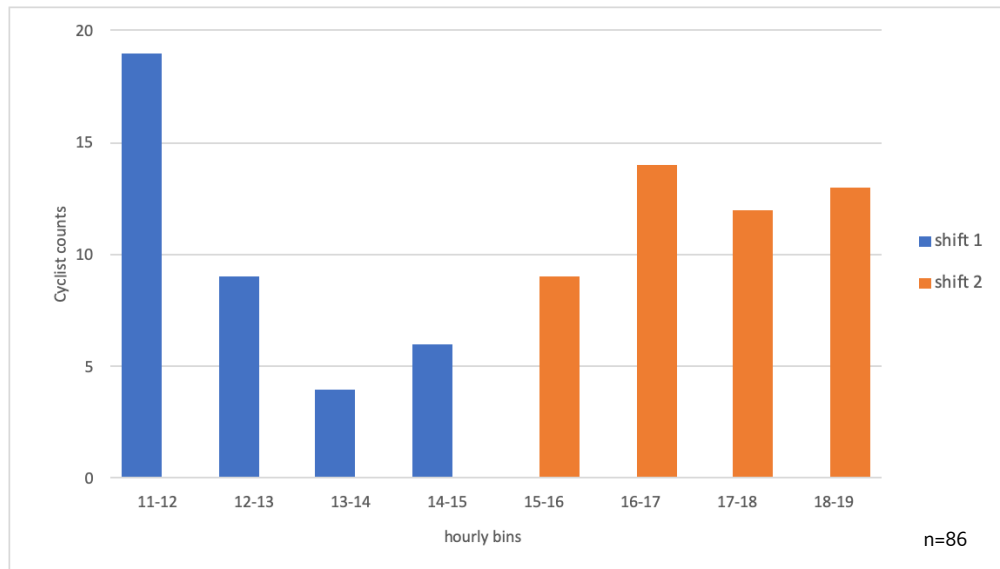




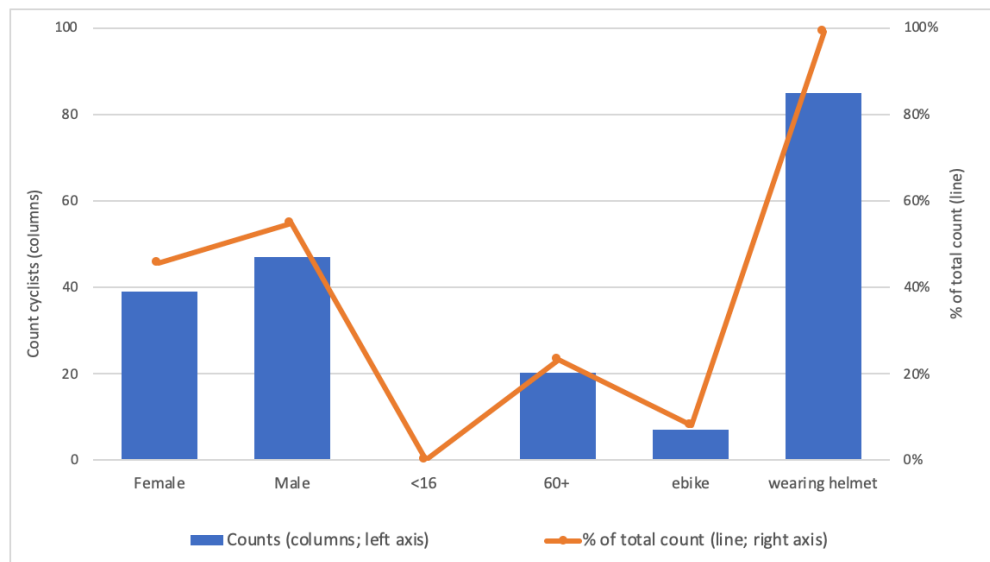
Figure 45: Anderton Rd &amp; Idiens Way &amp; Dryden Rd – Summary counts by hour



The high count between 11am and noon is interesting: might there be a significant recreational cohort the counters caught the tail end of? The modest plateau through the afternoon and into the evening may reflect commuter cyclists returning.

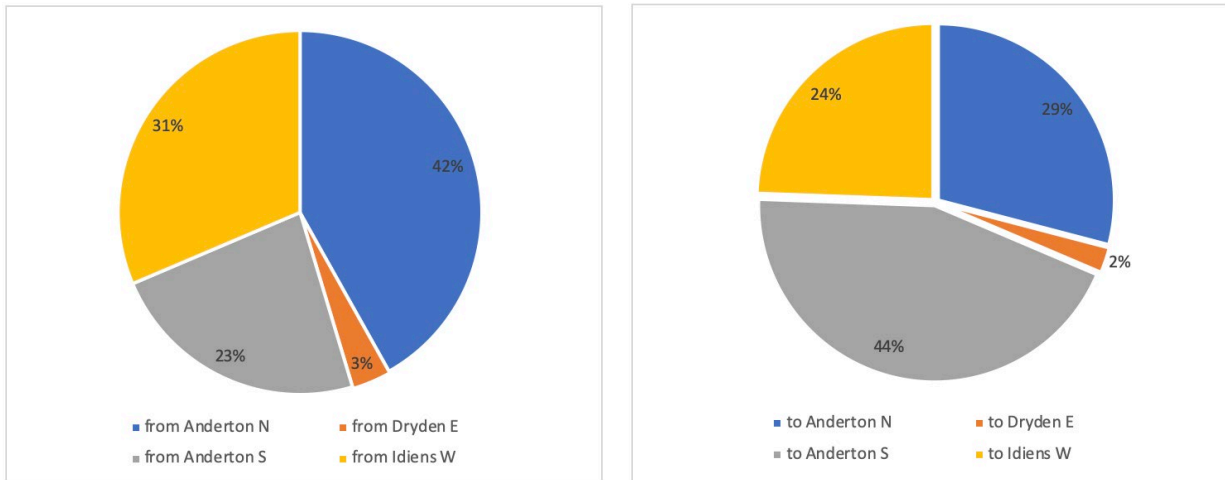
Figure 46: Anderton Rd &amp; Idiens Way &amp; Dryden Rd – other cycling characteristics

These characteristics often required that quick, subjective determinations be coded by volunteer counters. These numbers should be viewed as general indications.



- 99% of riders were coded as wearing helmets
- Over 20% of riders were coded as older, with slightly more of these older riders coded as males (vs females)
- Under 10% of riders were coded for ebikes; roughly 70% of these were also coded as female

Figure 47: Cyclist traffic into (left) and out from (right) Anderton Rd & Idiense Way & Dryden Rd, by road segments



The major source of cyclist traffic coming in to this location was along Anderton from the north. Complementing this, the major route for cyclist traffic leaving this location was heading south along Anderton. As expected, very limited action involved Dryden Road.

## 6.10 Anderton Road & Ellenor Road (total count - 56)

This was the lowest count realized from the 10 tracking stations on June 13 (lower than expected). Numbers are low enough that although the overall count is useful for comparison, interpretations of hourly blocks or detailed characteristics are unwise.

This location had been chosen due to interest in developing a viable cycling route to/from the Little River ferry terminal, which is reached via Ellenor Road. It was expected that there would also be a recreational cohort riding a popular loop near the east coast shores.

This was one of several T intersections tracked. It is rather of an unusual T intersection: to continue north along Anderton past the junction with Ellenor, traffic must make a left turn from a turning lane.

Figure 48: Anderton Rd & Ellenor Rd – road segments to & from, & counts by hour

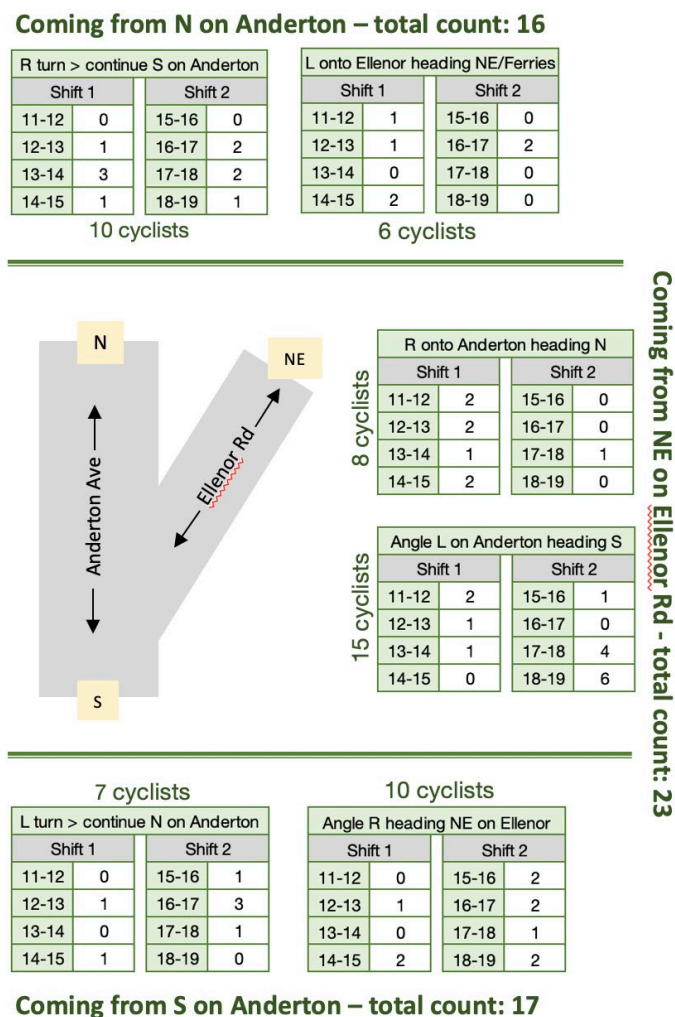
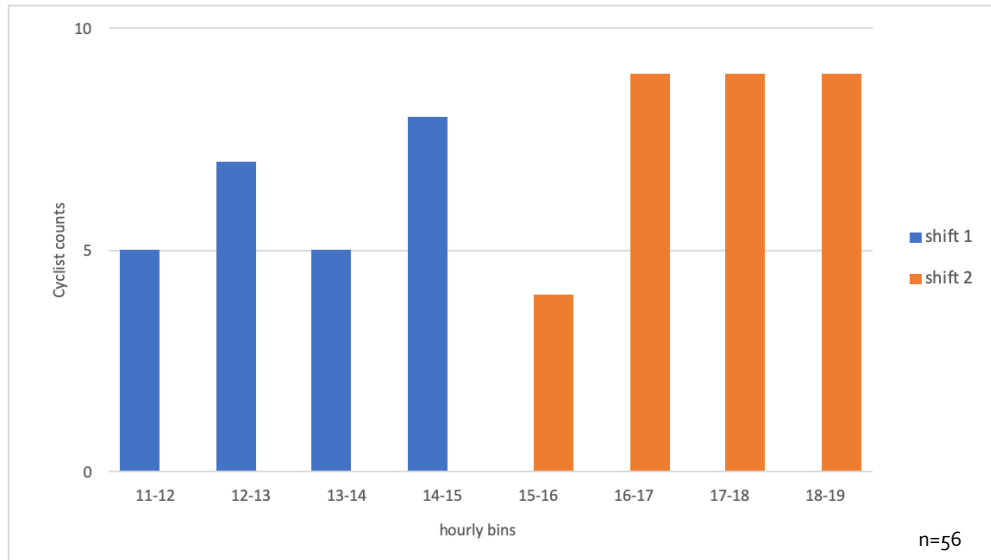


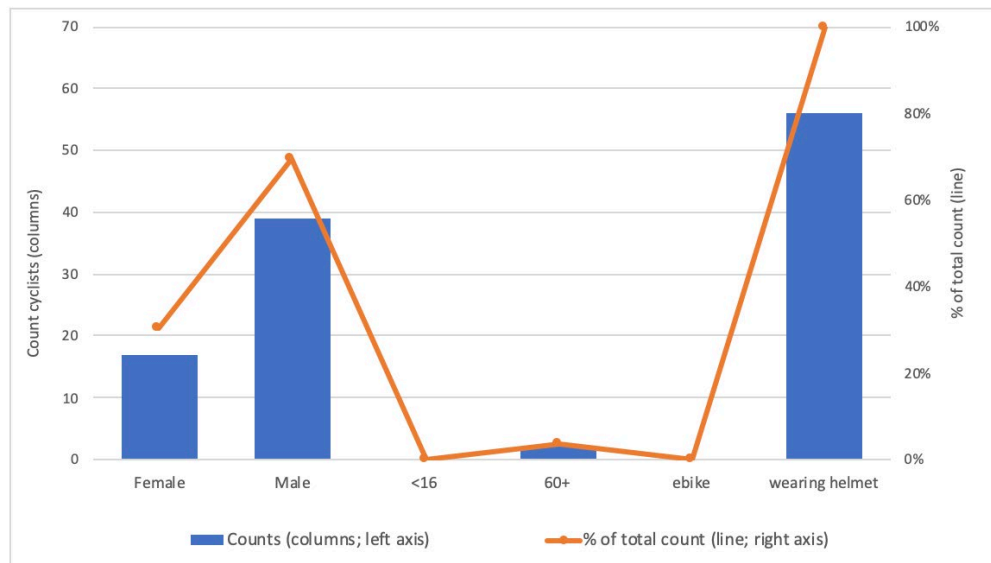
Figure 49: Anderton Rd &amp; Ellenor Rd – Summary counts by hour



Ferries from Little River to Powell River were scheduled to depart at 3:25 and 7:10pm: this did not appear to impact numbers (nor did ferries scheduled to arrive at 1:20 and 5pm).

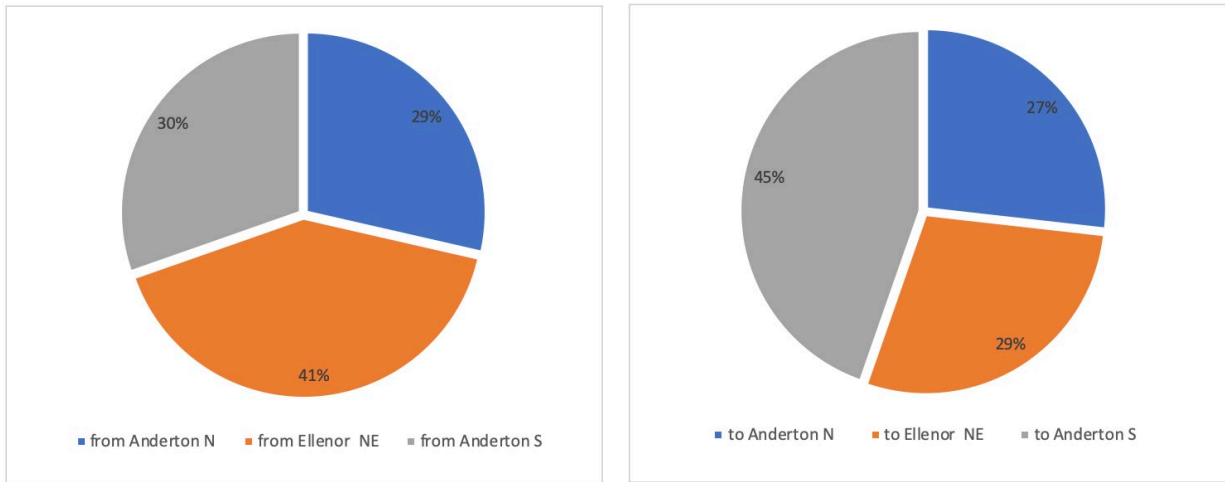
Figure 50: Anderton Rd &amp; Ellenor Rd – other cycling characteristics

*These characteristics often required that quick, subjective determinations be coded by volunteer counters. These numbers should be viewed as tentative, given the small sample we have from this location.*



- Less than 5% of riders were coded as older
- There were no riders coded for ebikes
- 100% of riders were coded as wearing helmets

*Figure 51: Cyclist traffic into (left) and out from (right) Anderton Rd & Ellenor Rd, by road segments*



The largest inflow of cyclists came along Ellenor Road from the NE. Leaving this location, most traffic continued south along Anderton towards Comox or Courtenay.

## 7. APPENDIX 1: SAMPLE COUNTING FORMS

Figure 52: Sample 'Main Coding Form' for recording passing cyclists

**CVCCo June 2019 Cyclist Counts** (each passing cyclist should get only one tick, in appropriate tally box)

Volunteer(s):	Page      of
Location: Fitzgerald Ave and 17 <sup>th</sup> St	Shift: 3pm to 7pm

**Turning right (onto 17<sup>th</sup> St SW)**

Time	Tallies
15-16	
16-17	
17-18	
18-19	

**Coming from  
NW (Fitzgerald Ave)**

**Turning left (onto 17<sup>th</sup> St NE to Bridge)**

Time	Use sidewalk to X	Use turning lane
15-16		
16-17		
17-18		
18-19		

**Going straight (continuing on Fitzgerald)**

Time	Tallies
15-16	
16-17	
17-18	
18-19	

**Turning left (onto Fitzgerald Ave NW)**

Time	Use sidewalk to X	Use turning lane
15-16		
16-17		
17-18		
18-19		

**Coming from SW  
(17<sup>th</sup> Street)**

**Turning right (onto Fitzgerald Ave NW)**

Time	Tallies
15-16	
16-17	
17-18	
18-19	

**Going straight (continue on 17<sup>th</sup> St to Bridge)**

Time	Tallies
15-16	
16-17	
17-18	
18-19	

**Coming from NE  
(17<sup>th</sup> St & Bridge)**

**Going straight (continuing on 17<sup>th</sup> St)**

Time	Tallies
15-16	
16-17	
17-18	
18-19	

**Turning right (onto Fitzgerald Ave SE)**

Time	Tallies
15-16	
16-17	
17-18	
18-19	

**Coming from SE  
(Fitzgerald Ave)**

**Turning left (onto Fitzgerald Ave SE)**

Time	Tallies
15-16	
16-17	
17-18	
18-19	

**Going straight (continue on Fitzgerald)**

Time	Tallies
15-16	
16-17	
17-18	
18-19	

**Turning right (onto 17<sup>th</sup> towards bridge)**

Time	Tallies
15-16	
16-17	
17-18	
18-19	

**Turning left (SW onto 17<sup>th</sup> St)**

Time	Use sidewalk to X	Use turning lane
15-16		
16-17		
17-18		
18-19		

Fitzgerald Ave

17<sup>th</sup> Street

NW

SE

SW

NE

Figure 53: Sample 'Other Cyclist Characteristics' form

**CVCCo June 2019 Cyclist Counts – Tally Boxes**

Volunteer(s):	Page      of
Location:	Shift: 11am to 3pm

**Hour: 11am to 12noon – DON'T FORGET TO CHANGE SHEETS EVERY HOUR!**  
 One row for each passing cyclist – with 1 to 6 ticks recorded, as relevant

Cyclist count	Female	Male	<16 years	60+ years	ebike	No helmet	riding wrong side	riding sidewalk	touring cyclist
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

If you are unsure of something (eg gender or age) go with best guess or leave blank  
 But be sure to code anything else, if relevant