Comox Valley Cycling Coalition: CycleCV.com

5th Street Bridge Non-Vehicle Counts
Report on Findings

Version 1.0
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1. INTRODUCTION

The City of Courtenay is considering options for an improved solution for pedestrians, cyclists, mobility scooters and others to safely cross the Courtenay River. There is a current proposal to widen sidewalks on 5th Street Bridge, as part of an overall maintenance upgrade which is due. There is also consideration of a possible 6th Street crossing for pedestrians, cyclists and others.

This past June 2019, the Comox Valley Cycling Coalition (CVCCo) implemented a count of passing cyclists at 10 key locations throughout the Comox Valley. A prominent finding was that 5th Street Bridge stood out. Counts were very high and usage patterns were complex.

On Tuesday August 6th and Saturday August 11 (2019), CVCCo conducted counts of all non-vehicle crossings of 5th Street Bridge. 12 volunteers, plus a mobile support team, enabled the counts to be implemented for three shifts on each day: 7am to 11am, 11am to 3pm, and 3pm to 7pm.

Objectives of the August 5th Street Bridge counts were to:

- provide accurate counts of all non-vehicle users crossing the bridge
- gather data to support a deeper understanding of how non-vehicle users engage with the bridge (e.g. time of day? mode of crossing? preferred side to cross? direction of crossing?)
- provide an information resource to help inform the decision-making process for an improved Courtenay River crossing

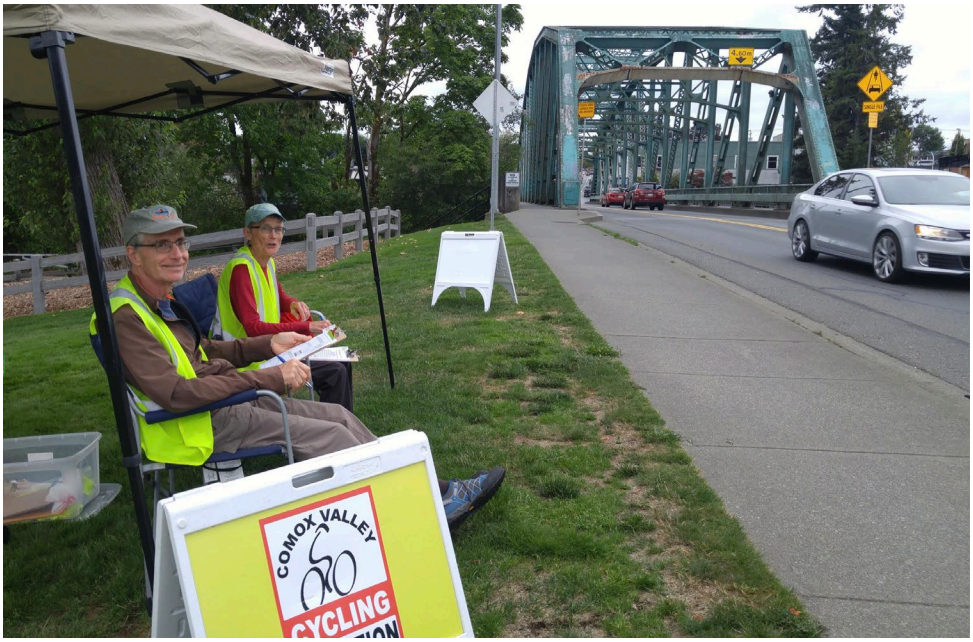
This report consolidates and presents data gathered during the two days of the August 2019 CVCCo 5th Street Bridge counts.

If you have questions about this report, or wish to share feedback, please contact the Comox Valley Cycling Coalition via our website (CycleCV.com), or by email at: CycleCV@gmail.com.

2. A WORD OF THANKS

Special thanks to the volunteers who participated and made this 5th Street Bridge count possible. Thanks also to CVCCo Board members on the support teams. The commitment and positive energy brought by all was fabulous.

Figure 1: Volunteer counters on the job



Bob Hauser & Roz Smith at the Comox Valley Cycling Coalition counting station, at the SE corner of 5th Street. They took on the 11am to 3pm shift on Saturday August 10. *Photo by Angela Holmes*

3. 5TH STREET BRIDGE

3.1 Clarification of terms

In this report, "the bridge" is used as a short version of "5th Street Bridge".

The compass orientation of the bridge crossing is from SW (5th Street in downtown Courtenay) to NE (Lewis & Sims Parks on the East Courtenay side of the river). To keep things simple, this report refers to the "west" (downtown) and "east" (east Courtenay) ends of the bridge.

The south of the bridge looks out towards the estuary. As opposed to the 'south sidewalk', the 'south side' of the bridge includes the south sidewalk, along with the adjacent roadway lane (with west to east traffic flow), which is used by some cyclists to cross. The 'north side' includes the north sidewalk and adjacent roadway lane (east to west traffic flow).

3.2 Courtenay plans

Here is a quote from the City of Courtenay webpage for the 5th Street Bridge Rehabilitation:

> *Built in 1960, the 5th Street Bridge acts as a gateway to downtown Courtenay and requires rehabilitation to maintain the existing level of service for multiple modes of transportation. Over the years, multiple engineering assessments of the bridge have identified the need for structural repairs and re-coating to prevent continued deterioration. This rehabilitation is important to extend the functional service life.*

Check out this City of Courtenay link (https://www.courtenay.ca/EN/main/city-hall/projects-gallery/5th-street-bridge-rehabilitation.html) for more information, including updates on Courtenay Council activity related to the bridge upgrade, proposed extended cantilever sidewalks, possible 6th Street crossing assessment, and more.

3.3 Bridge approaches

The count scope did not include tracking details of how bridge crossers engaged with each of the on / off approach options. However, the counts by transport mode, along with the patterns of crossing presented in this report, should help clarify the requirements that must be addressed by any new and/or upgraded approaches.

Following are a few characteristics of the current approaches:

- At the west (downtown) end of the bridge, along 5th Street, there is sharp little hill heading up to Cliffe Avenue. It is steep enough to discourage some casual cyclists, and others (e.g. less mobile pedestrians, or mothers with baby strollers), from taking this route. It also means that some cyclists (and perhaps skateboarders?) heading east over the bridge, may enter the bridge proper, or SW sidewalk access, moving at a swift speed. Any new 6th Street crossing, would face a similar short, sharp hill up from the river to the Courtenay Riverway and Cliffe Avenue.
- With many cyclists choosing to ride the bridge sidewalks, many continue riding on sidewalks beyond the bridge, or mount sidewalks well before reaching the bridge. This is particularly the case at the east end of the bridge.
- Under the east end of the bridge, along the east banks of the Courtenay River, is a roadway underpass, complete with sidewalk. There are looping access lanes to the parks and underpass on both sides further along to the east. However, at the immediate east end of the bridge (SE & NE corners), there are steep grass slopes down to this underpass. Volunteer counters had to keep a sharp eye out for pedestrians, cyclists and boarders who came up to, or left the bridge, via these steep slopes. A significant number of bridge crossers want to get down to (or come up from) the underpass as directly as possible, perhaps just to reach the riverside, or to cross to the other side of the road.
- At the west (downtown) end, there is a north <> south sidewalk under the bridge. However, to get up to (or go down from) the SW sidewalk, which enables access onward via Anderton to the popular Courtenay Riverway, one needs to go up a staircase. This makes this sidewalk unpopular with cyclists, and impossible for mobility scooters or baby strollers. The report author can report from personal experience: if I am cycling east to west heading up to the 5th Street business area, I will cycle the north roadway lane. However, if I plan to head south along the Riverway, I will take the south sidewalk. It is possible that this unpopular staircase partially explains why most non-vehicle bridge crossers choose to cross on the south side.
- In preparation for the bridge counts, we met with John Higginbotham of the Courtenay Accessibility Committee. He commented that there were issues with the angle of slope at several points on the approach sidewalks, particularly on the west (downtown) side. This creates challenges for mobility scooters.

3.4 More bridge characteristics

- At the start of the bridge sidewalks on either side, there are sign for cyclists to dismount. However, given that close to 80% of cyclists who choose to cross on a sidewalk ride either all or part of the way across, it seems the signs don't line up with how cyclists engage with the bridge. Anecdotal reports suggest that most cyclists stop riding to give right of way to oncoming pedestrians or mobility scooters.

- *Figure 2* (photo) below takes a closer look at the east end of 5th Street Bridge. See the sign in the red circle to the left: "*Cyclists using sidewalk stop and dismount*". At the right, another sign, showing a cyclist with a car behind, and the injunction "Single File". This is necessary, as the roadway lane is narrow, with a fixed railing to the right giving cyclists no room to move further over. Unfortunately, some vehicle drivers are not accustomed to falling into line behind cyclists. If a cyclist does not 'take the lane' so a vehicle cannot pass, some motorists invariably seek to pass – even on the narrow bridge. Cyclists get trapped in a frighteningly tight squeeze. For this reason, most cyclists choose to take the sidewalk across the bridge. With the current design, it is not advisable to encourage less confident cyclists to ride the roadway. Changing the sign to tell vehicle drivers NOT to pass cyclists on the bridge might prove to be both safer and more effective.

Figure 2: Cycling signs at east end of 5th Street Bridge

At the bottom left corner of the pic below, where the south sidewalk begins, is a sign highlighting yet another bridge attraction: "*No climbing or jumping from bridge*". In summertime, the river is popular with 'tubers' and others looking to cool off.
Photo by Angela Holmes

- Another observation from John Higginbotham of the Courtenay Accessibility Committee: he commented that a saving grace with the current bridge sidewalk is that, where the girders come down to the platform surface at the inner (roadway) side of the sidewalks (see pic above), they help form a succession of sheltered set-backs off the main sidewalk. This means that it is almost always possible to find room for two crossers of a sidewalk (even mobility scooters, cyclists or strollers) to pass each other in opposite directions: one party moves over into one of these girder set-backs.

4. KEY FINDINGS

- Over the two days, a total of **1,895 non-vehicle person counts** were recorded crossing the bridge.
  - There were 1,186 counts on Tuesday August 6, and 727 counts on Saturday August 10
  - 51% of total counts were pedestrians, 45% were cyclists, and 4% were mobility scooters or boarders/manual scooters.

- If we examine counts by hour of day, both Tuesday and Saturday present a rough curve, with lower counts early and late in the day, and the highest hourly counts roughly between noon and 5pm. The busiest single hour (123 crossings) was 12 noon to 1pm on Tuesday.
  - If we look only at cyclists, there is a 'bump' from 3 to 5pm (perhaps a commute cohort), along with a busy lunch hour.
- 55 mobility scooters were counted. They were distributed throughout the day, with the highest presence in the afternoon. Crossings in both directions are common on both sidewalks.
- As expected, the August bridge counts confirmed earlier findings of high counts with a varied and competing mix of crossings. This report details numbers, along with complex usage patterns. For example:
  - Bridge crossings recorded from west to east vs east to west were roughly comparable.
  - 60% of those crossing on a sidewalk chose the south sidewalk – a strong enough user preference to have possible design implications.
  - The majority of sidewalk users crossed in a direction aligned with the adjacent flow of vehicle traffic - west to east on the south sidewalk, and east to west on the north sidewalk. However, roughly 40% of sidewalk users chose to cross in the direction against the flow of adjacent vehicle traffic. Any future design must manage the frequent meetings of oncoming sidewalk users, from all modes of those crossing.
  - Approaching 70% of cyclists crossing 5th Street Bridge chose to use a sidewalk. This was expected, as the bridge roadway option is best for experienced cyclists only. Almost 80% of cyclists on a sidewalk chose to ride all or part of their crossing.
  - Count volunteers reported that sidewalk users demonstrate considerable civility to manage when oncoming parties meet on a sidewalk. Most commonly, cyclists will stop, and often dismount, if they meet pedestrians.
- Just under 20% of cyclists were coded as likely seniors, which is consistent with the June counts. Interestingly, a lower 13% of pedestrians were coded as likely seniors.
- 7% of cyclists were coded as riding ebikes. This is lower than the 9% recorded during the counts in June, but is consistent with the % of ebikes coded in June just for 5th Street Bridge. Of those coded for ebikes, less than half were also coded as likely seniors.
- Roughly 64% of bridge crossers (all non-vehicle modes) were coded as male.
- 14 skateboarders or manual scooters were recorded, mostly in the mid to latter afternoon. 11 baby strollers were recorded. And yet more wheeled modes: volunteers made note of multiple shopping cart crossings.
- Adding to a lively mix were runners and dogs. This highlights the recreational attraction of the wider 5th Street Bridge area, with the Riverway to the SW, and the twin parks (Sims & Lewis) to the east.
- There were multiple reports of bridge crossers accessing or getting off both sidewalks via the steep grassy slopes at the east end of the bridge, down to the underpass between Lewis and Sims Parks. This may be relevant when considering the design for sidewalk approaches.

5. FINDINGS

Percentage findings have been rounded to the nearest whole number.

5.1 Some high level views

A total of **1,895 non-vehicle person crossings** were recorded over the two days the 5th Street Bridge count.

Figure 3: Total counts, by day, by north vs south side of bridge

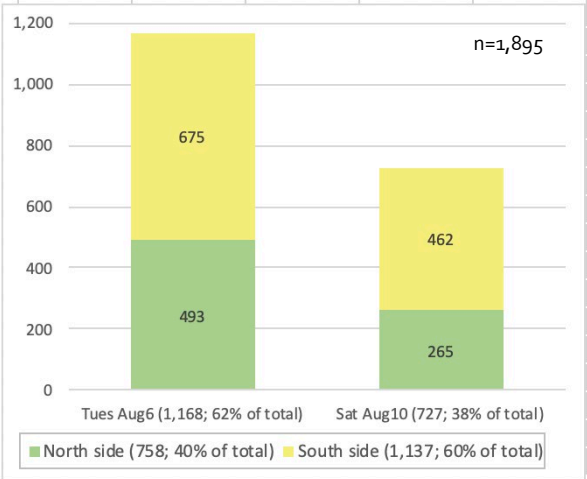


Figure 4: Counts and %, by pedestrian, cyclist & other

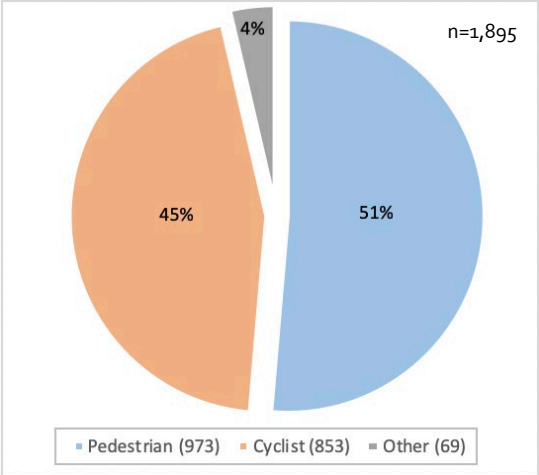


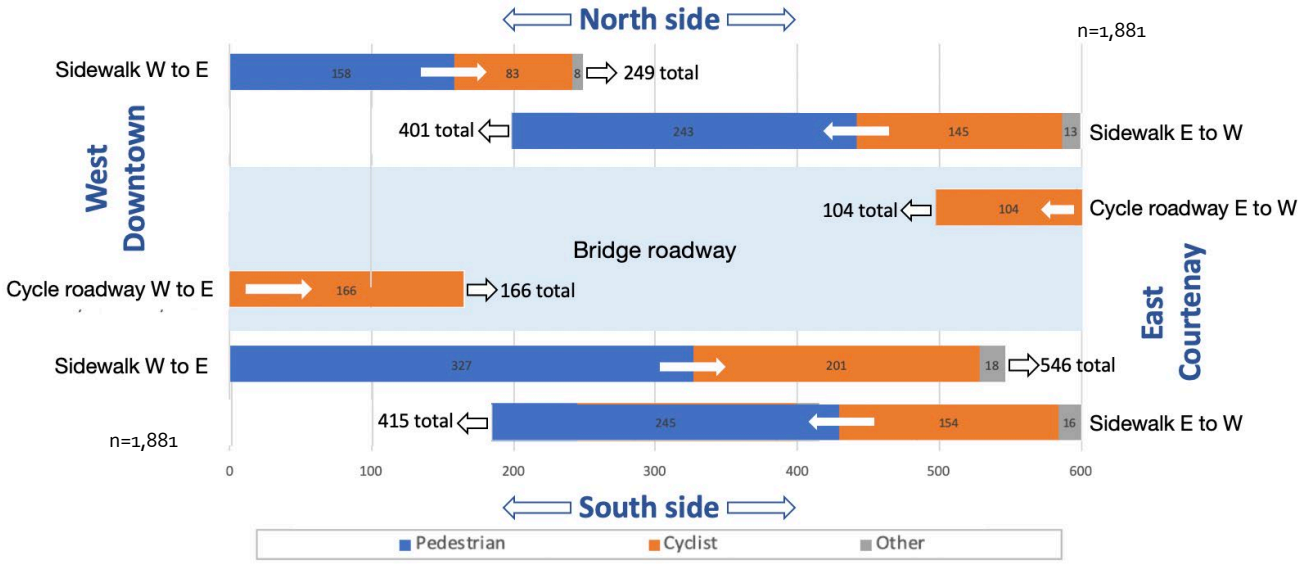
Figure 3 shows that 1,168 Tuesday crossings comprise 62% of our 2-day count sample; 727 Saturday crossings comprise the remaining 38%.

When designing the bridge counts, a weekday and weekend day had been chosen to see whether there would be different usage profiles. Unfortunately, this question remains unresolved. The difference in counts for the two days is partly explained by the fine, hot summer weather on Tuesday, vs the cooler, overcast weather on Saturday, with a forecast of likely rain. However, the significant count recorded on the Saturday (727) is useful, as it indicates the bridge gets high non-vehicle usage even on days of poor weather.

Figure 3 also splits out daily crossing counts by side of bridge used. The south side is the most popular, with 60% of crossings. 58% of Tuesday crossings, and 64% of Saturday crossings, were on the south side. This strong preference may have implications on the design process.

Figure 4 aggregates counts from the two days to show the overall percentages of non-vehicle mode crossings of the bridge. 51% of the sample were pedestrians, 45% cyclists and the rest 'other'. Other is comprised of mobility scooters and skateboarders / manual scooters. Any design for non-vehicle bridge crossings must accommodate all these modes.

Figure 5: Counts by transport mode, crossing option chosen, & direction of travel

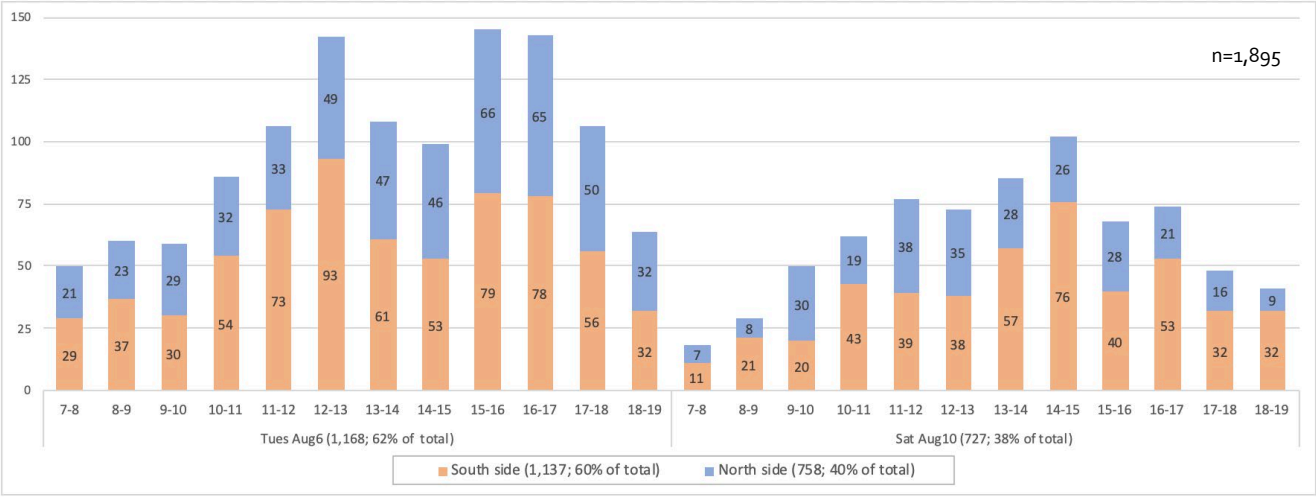


The above schematic presents the flow of non-vehicle traffic across the bridge, based on counts from both days. 14 boarders (skateboards or manual scooters) have been excluded as we did not record their crossing with direction of travel.

A few key points.

- on both the north sidewalk and the south sidewalk, there are significant numbers of both cyclists and pedestrians, with a smaller number of mobility scooters (other). Lots of crossers, of all modes, are using both sidewalks to go in both directions.
- a minority of cyclists (32%) in our counts chose to cross by riding the bridge with the flow of traffic (east to west in the north lane, and west to east in the south lane)
- sidewalk counts of cyclists include both those who chose to ride the sidewalks, and those who chose to walk their bikes on the sidewalks.

Figure 6: Counts by day, hour & side of crossing



The above chart includes bridge crossers on the sidewalks, along with cyclists riding either the south or north roadway lanes.

60% of bridge crossers chose the south side (58% on Tuesday; 64% on Saturday). Particularly on Tuesday, bridge crossers were out fairly early, with 50 from 7 to 8am, many of them perhaps on their way to work. Tuesday had several peaks, at mid-day, and from 3 to 5pm, which may reflect an afternoon cohort on their way home from work. Crossings were fairly steady throughout the day, particularly from 10am to 6pm.

Peak counts on Saturday were from 2 to 3 pm in the afternoon. There were steady counts from 10am through to 5pm.

Figure 7: Counts by day, hour & direction of crossing

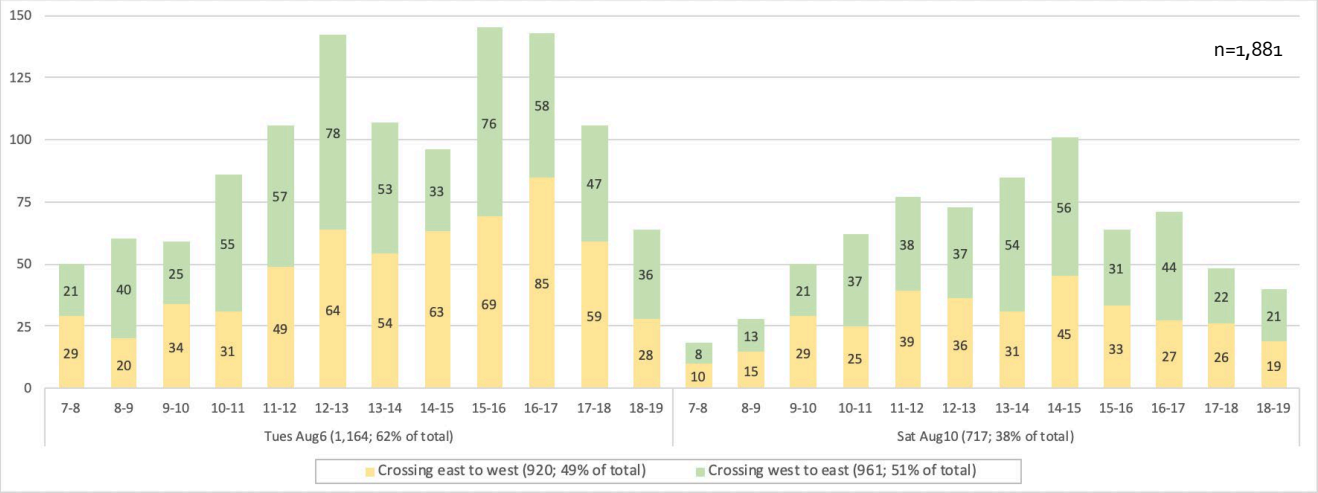


Figure 7 (above) has excluded 14 boarders as we did not collect direction of travel for these.

Although *Figure 6* showed a preference to cross on the south side of the bridge, *Figure 7* shows that counts by direction of crossing (east to west, or west to east) were roughly comparable. 51% of crossers over the two days went from west to east.

Figure 8: Crossing on the sidewalks, by side of bridge, hour & mode of transport

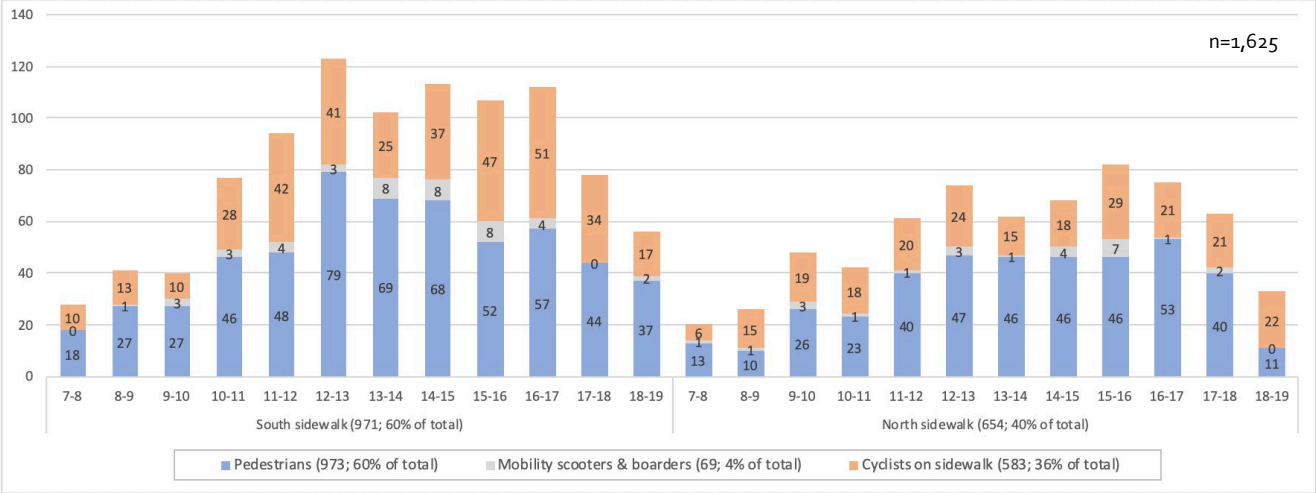


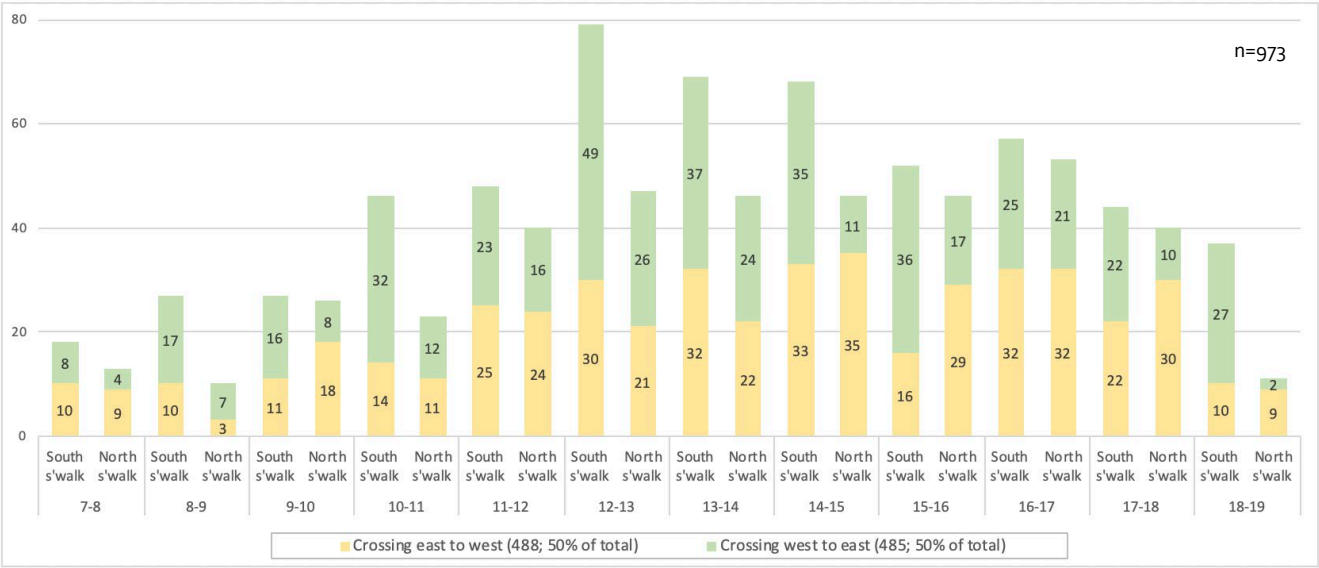
Figure 8 above focuses on only sidewalk crossings, by mode of transport. Counts are aggregated for the two days and presented by hour, split out by those recorded on the south sidewalk vs the north sidewalk. Cyclists riding across on the bridge roadway have been excluded, but cyclists riding or walking their bikes on the sidewalks have been included.

The south sidewalk gets significantly more use than the north sidewalk. For this sidewalk view, 60% of counts are pedestrians, 36% are cyclists, and 4% are mobility scooters or boarders.

80% of the 'mobility scooters and boarders' group were mobility scooters. Counts were modest, so any conclusions must be tentative. We see the highest counts from 1 to 4pm on the south sidewalk, and from 2 to 4pm on the north sidewalk.

5.2 Pedestrian counts & crossing choices

Figure 9: Counts of Pedestrians, by hour, bridge sidewalk chosen (south or north), & direction of crossing



Consistent with the overall sample (all modes), pedestrian crossings over the 2 days were split almost equally between those headed east to west vs those headed west to east. Once more, though, we see a strong preference for the south sidewalk.

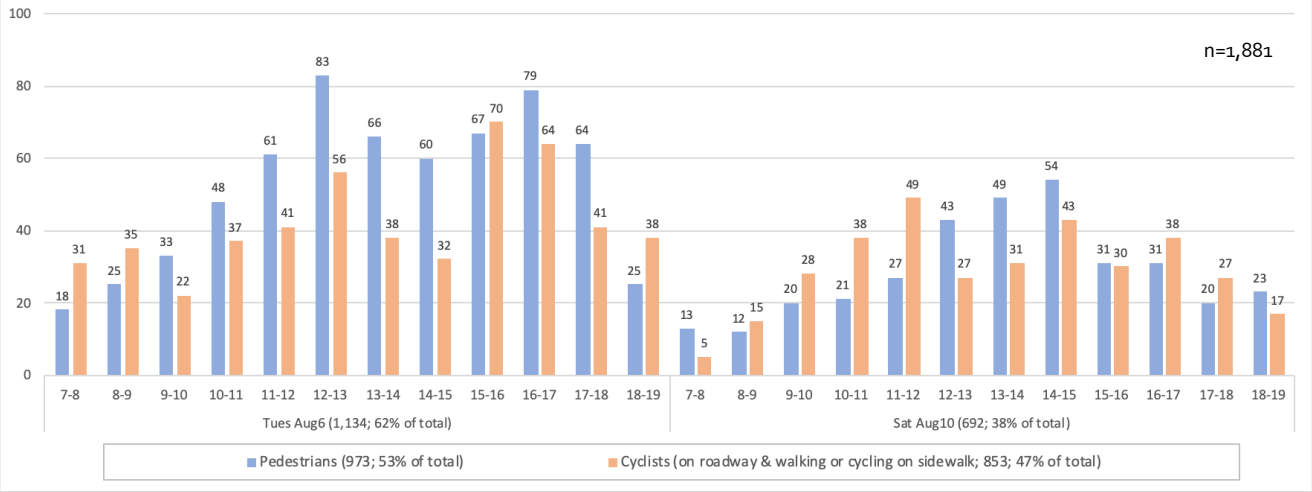
Figure 10: Pedestrian summary counts and %, by direction of crossing and bridge sidewalk used (south or north)

		Cross from east to west		Cross from west to east	
Sidewalk	All Pedestrians	Count	%	Count	%
South sidewalk	572	245	43%	327	57%
North sidewalk	401	243	61%	158	39%
Total	973	488	50%	485	50%

Although pedestrians cross in both directions on both the north and south sidewalks, *Figure 10* shows that a majority of pedestrians cross in the directions aligned with the flow of traffic. On the north sidewalk, 61% of pedestrians crossed from east to west, aligned with vehicle traffic on the north bridge lane. On the south sidewalk, 57% of pedestrians crossed from west to east, aligned with vehicle traffic on the south bridge lane.

Perhaps the more important information is that 403 (41%) of all pedestrians chose to cross on a sidewalk in the direction against the flow of traffic in the adjacent vehicle lane.

Figure 11: Comparing pedestrian to cyclist counts, by day & hour



Pedestrians and cyclists comprised 96% of total counts. *Figure 11* above provides a side by side comparison of pedestrian and cyclist bridge crossings, by hour. Mobility scooters and boarders have been excluded. All pedestrians used the sidewalks. Cyclist counts are a mix of those riding the bridge roadway, as well as those riding or walking the sidewalks.

Pedestrians comprised 53% of combined cyclist and pedestrian counts. On Tuesday, pedestrians were over 55% of the combined total, while on Saturday, pedestrians were a shade below 50%.

Cyclists outnumbered pedestrians from 7 to 9 on Tuesday morning, likely as many were commuter cyclists. Cyclist counts on Tuesday were low in the early afternoon, then highest between 3 and 5 pm,

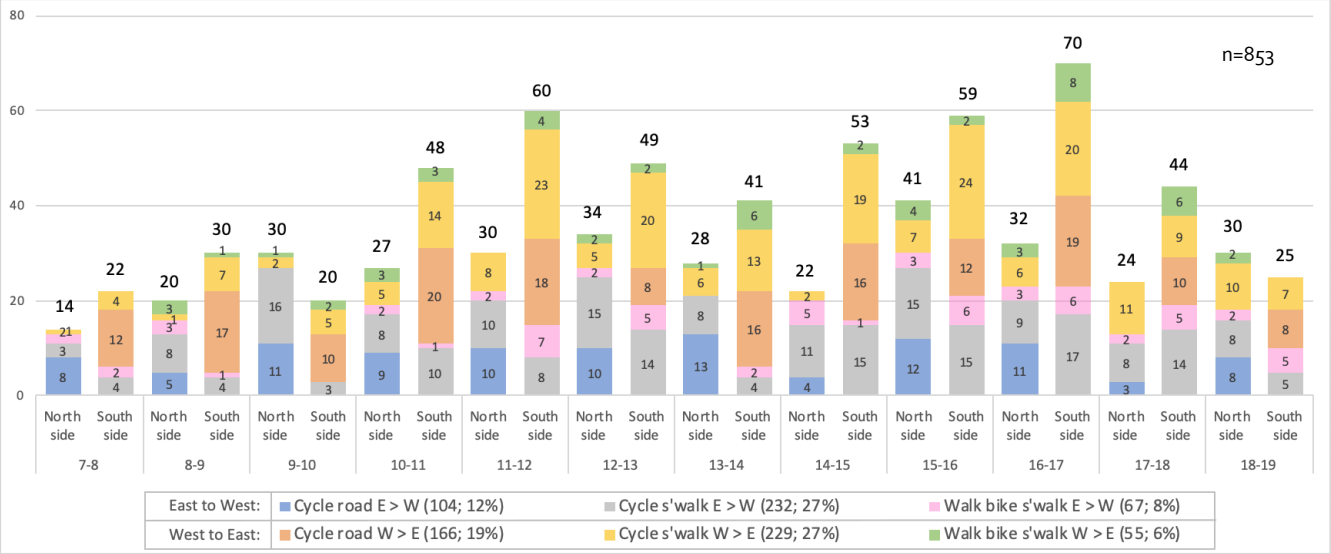
again suggesting a commuter cohort. Pedestrian counts on Tuesday were steadily high from 11am to 6pm, peaking from 12 noon to 1pm.

On Saturday, 6 hours had more cyclists, and 6 had more pedestrians. Cyclists were ahead from 9am to 12 noon; pedestrians from noon through the early afternoon.

5.3 Cyclist counts & crossing choices

Cyclist counts include ebikes, which were treated like a regular bicycle on the main form. On the secondary ('Other Info') form, ebikes were recorded as a distinct category.

Figure 12: Counts of cyclists, by hour, side of bridge, how they crossed, & direction of crossing



A busy chart, based on combined cyclist counts from the 2 days. Cyclists get complicated as, along with hour of crossing, they choose the north vs south side of the bridge, whether they cross from east to west or vice versa, and also how they cross: cycling on the roadway, or cycling a sidewalk, or walking their bike across a sidewalk. For those choosing the roadway, all counts on the south side cycled from west to east, and all counts on the north side cycled from east to west (aligned with the flow of vehicle traffic).

One approach to *Figure 12* is to compare column subtotals for the north side vs the south side for each hour of the day. You can then delve deeper into each column via the stacked colour options, which cover 6 categories (2 directions of crossing, by 3 types of crossings). Or – to view the above numbers summarized without the hourly breakdown, see *Figure 13* below.

The busiest stretch for cyclist crossings is from 3 to 5pm in the afternoon, with 10am until noon also showing high counts. As we have seen previously, there are significantly more cyclist crossings on the south side of the bridge than the north side. Intriguingly, the only exceptions to this south side preference were from 9 to 10am, and 6 to 7pm.

Early in the day, from 7 to 8am (both sides), and for the south side only from 8 to 11am, cycling the bridge roadway is the most commonly used crossing option, suggesting an experienced commute cohort at this time.

Figure 13: Cyclist direction of crossing – counts and % by side of bridge & how crossed

		East to West		West to East		
Side of Bridge	How to Cross	Count	% E>W	Count	% W>E	Total
South Side	Ride roadway	0	0	166	100%	166
	Cycle sidewalk	113	41%	165	59%	278
	Walk bike on sidewalk	41	53%	36	47%	77
South side subtotals		154	30%	367	70%	521
North Side	Ride roadway	104	100%	0	0%	104
	Cycle sidewalk	119	65%	64	35%	183
	Walk bike on sidewalk	26	58%	19	42%	45
North side subtotals		249	75%	83	25%	332
Total		403	47%	450	53%	853

61% of cyclists (521) chose to cross on the south side of the bridge. 32% (166) of these cycled the bridge roadway from west to east. Of the remaining 355 cyclists who chose to cross on the south sidewalk, 78% chose to ride on the sidewalk.

39% of cyclists (332) chose to cross on the north side of the bridge. 31% (104) of these cycled the bridge roadway from east to west. Of the remaining 228 cyclists who chose to cross on the north sidewalk, 80% chose to ride on the sidewalk.

583 of 853 cyclists overall (68%) crossed the bridge on a sidewalk. Of these 583 cyclists, 461 (79%) rode their bikes on a sidewalk.

Volunteer counters were instructed to code a sidewalk cyclist as "riding" if they rode either all or part of the way across. There were anecdotal reports that cyclists who chose to ride the sidewalks would generally stop and pull over to give right of way, and perhaps dismount, if they encountered oncoming pedestrians or mobility scooters. Occasionally pedestrians would pull off to the side first, and cyclists would slow down then ride past. If cyclists came up behind slower pedestrians, in most cases they simply adjusted to the slower pace.

The above indicates that cyclists riding the sidewalks commonly give right of way to other modes of transport (though I am sure there are exceptions). This was also noted during the June CVCCo cyclist counts for other multi-use routes such as the Courtenay Riverway. This suggests a culture of civility on multi-user paths. In other jurisdictions, such as the Lower Mainland where the report author has experience as an active transportation advocate, a premise was that multi-use pathways would invariably lead to occurrences of contention. Will Courtenay will be able to sustain its good behaviour into the future?

5.4 eBikes

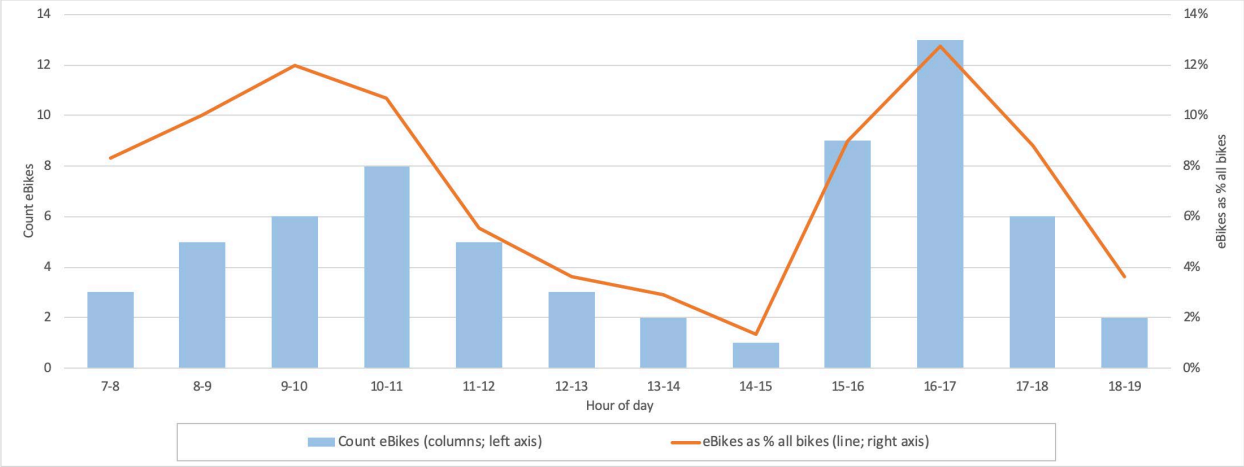
Ebikes represent a distinct and increasingly popular category of cycling. Bike shops in Courtenay say ebike sales now exceed those of mountain bikes.

A 2018 BC Cycling Coalition Study on Cycling Feasibility around the Comox Valley (Mid Vancouver Island Cycling Feasibility Study, pp 32,33) quoted a recent local survey where 9% of respondents reported owning or having access to an electric bike. How high might this percentage grow? In the Netherlands, ebike ownership exceeded 30% in 2017.

Ebikes may be special in terms of designing cycling pathways, as they often move faster than regular bikes. As ebikes can be heavier, they can be slower to react if corrective action is needed.

For the 5th Street Bridge counts, volunteers were instructed to count ebikes with other bicyclists on the 'Main Tally Form', so they are included in the cyclist counts in section 6.3 preceding. A separate tally box was also included for ebikes in the secondary 'Other Info Form', which was used for the chart below.

Figure 14: eBike counts, and % of all cyclists, by hour



It is not clear how comprehensive the ebike counts can be considered, as limited instruction in the identification of ebikes was conducted with volunteers. It is possible counts are understated, so these numbers should be considered a general indication only.

Over 60 ebikes were recorded (above 7% of all cyclists counted). As can be seen in *Figure 14*, there was no consistent pattern throughout the hours of the day, although high counts from 3 to 5pm are roughly consistent with the broader cyclist cohort.

Roughly 40% of ebikes recoded were also coded as 'seniors'. This is intriguingly low, suggesting that a view of ebikes as largely associated with seniors needs further investigation.

5.5 Mobility scooter counts & crossing choices

On the data capture forms used for the count, 'mobility scooter' was understood to include all motorized scooters and motorized wheelchairs. There was also a category for "manual" (human propelled) mobility scooters and wheelchairs, but no counts were recorded for this category.

Figure 15: Counts of mobility scooters, by hour, bridge sidewalk (south or north), & direction of crossing

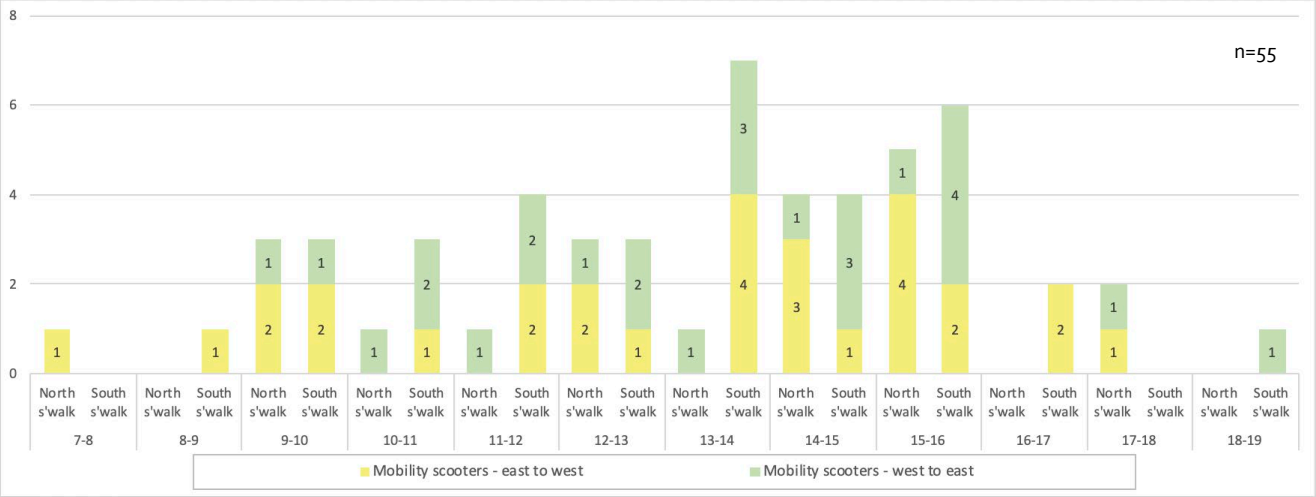


Figure 15 above combines counts from the two days. Counts are modest for mobility scooters and findings here should be viewed as indications only. However, mobility scooters are a significant presence, and a significant consideration when it comes to design of an enhanced 5th Street Bridge crossing.

Figure 16: Mobility scooter direction of crossing – counts and % by bridge sidewalk used (south or north)

		Cross from east to west		Cross from west to east	
Sidewalk	All mobility scooters	Count	% E>W	Count	% W>E
South sidewalk	34	16	47%	18	53%
North sidewalk	21	13	62%	8	38%
Total	55	29	53%	26	47%

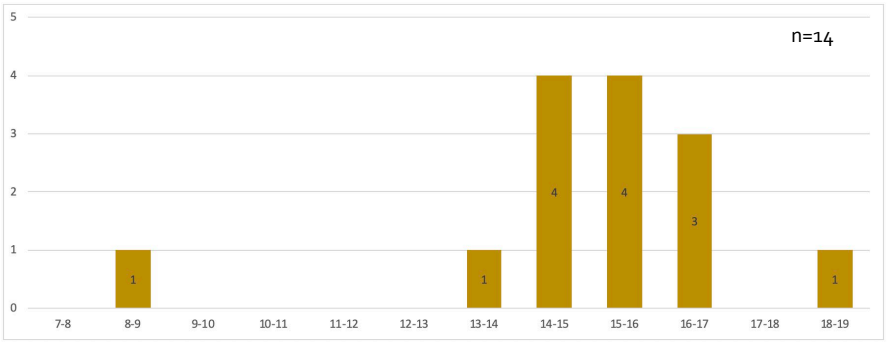
34 of 55 (62%) of mobility scooter crossings were on the south sidewalk, a clear preference. 53% of crossings on the south sidewalk were from west to east. On the north sidewalk, 62% of mobility scooter crossings were from east to west.

5.6 Boarders, scooters & strollers, counts & crossing choices

This final section is a catch-all for other wheeled transportation modes. Several of these were recorded on the count forms. Although numbers are small, they have been included as they highlight the variety and complexity of bridge users.

There was a coding box for "boards / scooters", which was included after a number of these were observed during the CVCCo June cyclist counts. Boards refers to skateboards. Scooters in this case are understood to mean the type that are human propelled, usually by someone standing on the scooter with one foot, and pushing against the ground with the other foot. We did not expect many boarders / scooters (14 were recorded), and the data capture form did not also collect direction of travel across the bridge.

Figure 17: Counts of boarders / scooters, by hour

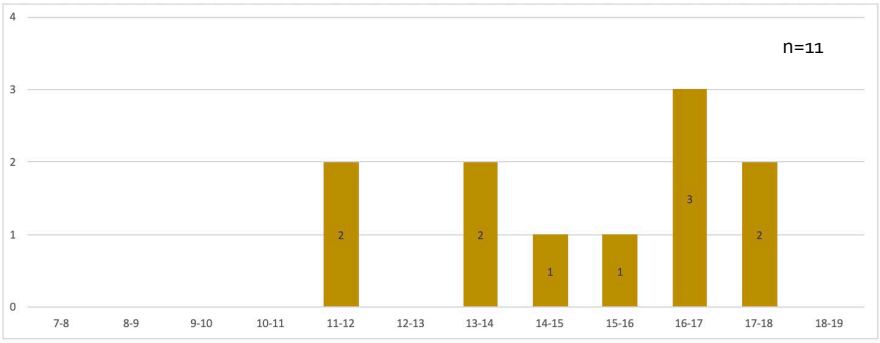


Counts were low, and the boarders and scooters mostly crossed in the afternoon, with 2 to 5pm showing higher totals (though still low). 10 of the 14 crossings were on the south side. Between 2 and 3pm on Tuesday August 6, one youth skateboarder was recorded riding the roadway across the bridge(!)

Given the tiny sample size, *Figure 17* should be viewed as a possible indication only.

A number of folks have told us that motorized skateboards and motorized scooters (motors on scooters that have traditionally been manually pushed along with one foot) are growing at fast rates, mostly in urban areas. One can expect to see more of these motorized wheels in Courtenay.

Figure 18: Counts of strollers, by hour



Volunteers also recorded strollers crossing the bridge sidewalks. With the 5th Street Bridge area an attraction for families, it is natural to also see baby strollers on the bridge.

The above numbers are so tiny they should be viewed as a possible indication only.

5.7 Some Demographics

Demographic data related to age and gender was gathered. This sometimes required hasty subjective determinations as to the gender and approximate age of passing persons. Volunteers were instructed to go with their best instinct, or to leave tally boxes empty if they felt stumped. Findings below should only be used to inform general indications.

Figure 19: Counts by gender, and % female, by hour of day

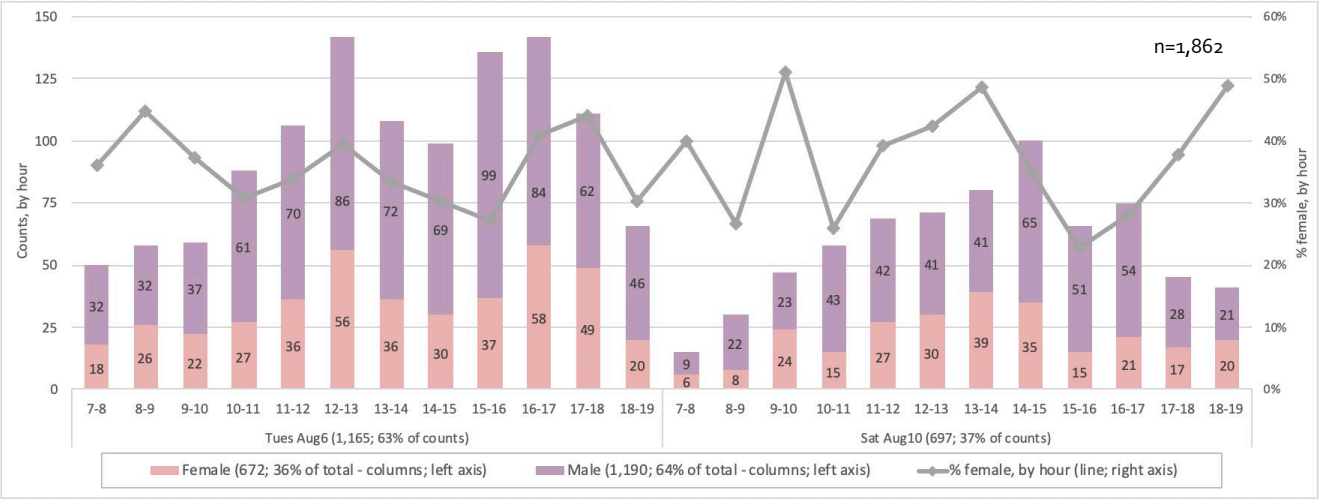


Figure 17 above shows male and female count comparisons by day and hour. Males accounted for 64% of counts on Tuesday and 63% on Saturday.

For the counts, we again see the daily curve, starting and finishing with lower counts. This trend is roughly common to male and female, with male counts higher as we would expect, given their representation within the overall sample. There are limited hourly ups and downs, in both overall counts and gender split, and it is possible that such variability is simply to be expected.

The percentage female by hour falls within a broad band roughly between just under 25% and just over 50%, with considerable hourly variation throughout the day.

Figure 20: A look into age groups, for pedestrians and cyclists

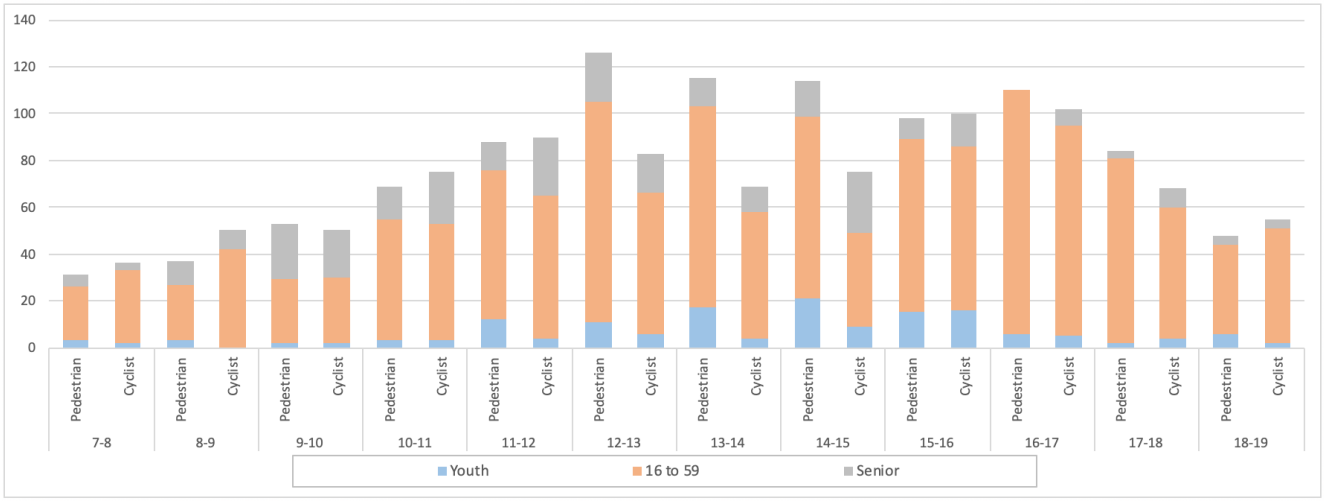


Figure 18 breaks counts of pedestrians and cyclists out into broad age categories: youth (0 to 15 years), 16 to 59 years, and Senior (60 years and above). Ebikes have been counted together with regular bikes (as was done with cyclist counts in section 6.3).

The chart does not incorporate column values as the coding for these age categories involved subjective determinations, and was occasionally not recorded. The chart should be used only to inform general indications.

As we saw earlier in *Figure 4*, overall, more pedestrians were recorded than cyclists. However, more senior cyclists were coded than senior pedestrians. This is because slightly below 20% of all cyclists were coded as likely seniors, whereas roughly 13% of all pedestrians were coded as likely seniors. This is interesting, as some hold the view that most seniors seek less strenuous recreation.

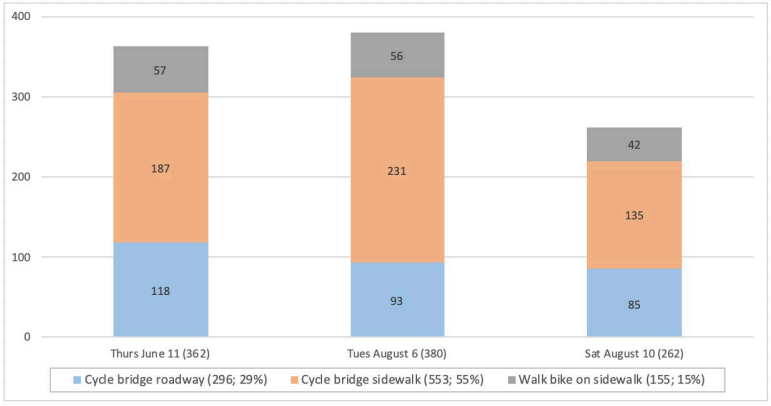
5.8 Lining up with the June 2019 counts

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. Weather was excellent. One of the locations was 5th Street Bridge, where the high counts and complex mix of bridge users stood out.

There are scope distinctions between the June count and the August count on 5th Street Bridge. The June count recorded cyclists only, while the August bridge count recorded all non-vehicle crossings. The June count was from 11am to 7pm, whereas the August bridge counts were from 7am to 7pm. The June count did not capture the sidewalk used (north or south) or the direction of crossing.

This still, however, leaves us with a significant overlap: during both counts, we recorded cyclists crossing the bridge between 11am and 7pm, along with a breakdown of how they crossed. Following are some observations based on lining comparable results up side by side.

Figure 21: Counts of cyclists crossing 5th Street Bridge between 11am & 7pm, by day, by how the bridge was crossed



For *Figure 21* above, counts from the early shift, 7am to 11am, have been removed from the August numbers in order to match the hours covered in June.

The total for Thursday June 6 (362) is right in the neighbourhood of the total for the weekday count on Tuesday August 6 (380). This brings us a larger sample, and suggests these numbers can be considered typical for cyclists on a latter spring or summer weekday with good weather.

In both the June and August counts, riding the sidewalk is the most chosen option for cyclists to cross the bridge. Thursday June 11 had a higher percentage of cyclists who chose to ride the bridge roadway (33%) than Tuesday August 6 (24%). However, the June 11 percentage was similar to Saturday August 10 (32%).

Several further comparisons between the June and August results:

- Overall, for the 10 locations tracked in the June count, just under 20% of cyclists were coded as likely seniors (60 years and above). This same figure applied to 5th Street Bridge alone in June. Results for our 2 day 5th Street Bridge count in August also showed just under 20% of cyclists coded as likely seniors – a very consistent result.
- In the June count, ebikes comprised roughly 9% of all cyclists recorded across the 10 locations. For the 5th Street Bridge location alone, the percentage of cyclists on ebikes was roughly 7%. Results for our 2 day 5th Street Bridge count in August had roughly 7% of cyclists coded as ebikes. For both rounds of counting, in June and August, less than half of ebikes coded were also coded as likely seniors.

6. Further Comments and Observations

Below are some comments taken from the data capture forms.

- Just after 7pm on Tuesday August 6, the report author and two volunteers observed a scary bridge crossing. A cyclist riding east to west on the north side roadway stuck to the right side of the lane, not 'taking the lane'. A transit bus behind chose to pass the cyclist on the bridge, trapping the cyclist into a narrow space between the bus and the inner railing. Several vehicles behind the bus could not see the cyclist, and so also passed the cyclist to the left as they were coming off the bridge heading west. To quote one of the volunteers: "*All in all, a very dangerous situation and it probably happens more than we know*." We plan to share this incident report with Transit, and suggest that bus drivers should be instructed to NOT pass cyclists on the bridge. It is likely that most cyclists who do not 'take the lane' to ensure no one will pass them, are less confident riders, less able to manage when they find themselves in a scary situation.
- Some comments about the vehicle traffic on the bridge:
  - On Tuesday August 6, a volunteer counter on the early shift (7am to 11am), recorded: "*9:50am first back up for cars going east over bridge*".
  - Another volunteer counter, working the 11am to 3pm shift on Tuesday, recorded when vehicle traffic backed up to a stop on the bridge. This happened at 11:20, 11:29, 11:45, 11:48, 11:53, 12:07, 13:06 and 13:36.
  - Finally, in the last Tuesday shift, 3pm to 7pm, another volunteer recorded that between 4:10 and 4:30, traffic "*… backed up onto bridge heading east*".
- Several volunteers noted that occasionally bridge crossers would stop halfway across a sidewalk to view the river. It is not uncommon to see seals, water birds or paddle boarders. On hot summer days, the most common wildlife are tubers drifting downriver. It may be that a viewing platform should be part of any design.

7. Some Words on Approach & Numbers

The focus of the 2 days counts was on non-vehicle crossings of 5th Street Bridge.

Roadside counters had 2 forms to complete. Sample forms are attached in *Appendix 1*. The Main Tally Form recorded 1 mark for each person crossing, placed within boxes specifying further information such as hour of day, mode of transport (e.g. pedestrian, cyclist), method of crossing (e.g. sidewalk, roadway), north or south side of bridge, and direction of crossing. The counts from the Main Tally Form are the basis for most of the analysis in this report, and can be considered to be accurate, or very nearly so.

The second form gathered characteristics such as gender, senior cyclists, and riding an ebike. Each person crossing was recorded in one row, which might receive multiple marks if relevant to the person being recorded. These roadside determinations can be subjective and were often hastily made. Volunteers were briefed, but not trained, and some variations in coding behaviour are likely. Findings based on this second form are best used only to inform general indications.

Both data capture forms had places for volunteers to add comments. Such comments were not required, but we did get useful observations.

As our interest was in the volume of non-vehicle bridge crossings, the same person was counted multiple times should they cross in one direction and then return later.

We chose to implement 3 full shifts of counting, covering 7am to 7pm on both Tuesday and Saturday, as we hoped to capture any commuter cohorts (particularly on the Tuesday). We chose a weekday and a weekend day, as it was uncertain how much variation there might be.

No construction or traffic obstructions were noted in the vicinity on either August count day.

8. APPENDIX 1: SAMPLE COUNTING FORMS

Figure 22: Sample 'Main Coding Form' for 5th Street Bridge Counts

CVCCo 5th St Bridge Main Tally Sheet (1 mark only, for each passing person, in appropriate tally box)

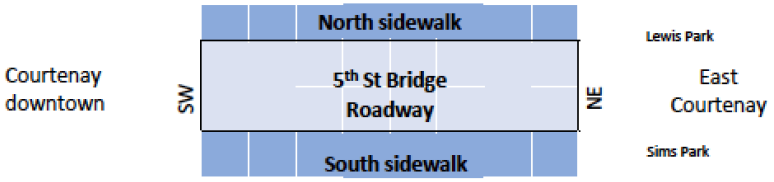
Volunteer(s):		Page of
Location: 5th Street Bridge	Date:	Shift: 7am to 11am

Cyclists (north)

	← East to West (E Courtenay to Downtown) ←			→ W to E (Downtown to E Courtenay) →	
Time	Cycle bridge roadway	Cycle sidewalk	Walk bike on sidewalk	Cycle sidewalk	Walk bike-sidewalk
7-8					
8-9					
9-10					
10-11					

Non-cyclists (north)

	← E to W on sidewalk (E Courtenay to Downtown) ←			→ W to E on sidewalk (Downtown to E Courtenay) →			← Both ways →
Time	Pedestrians	Mobility scooters	Mnl	Pedestrians	Mobility scooters	Mnl	Boards / scooters
7-8							
8-9							
9-10							
10-11							



Cyclists (south)

	→ West to East (downtown to E Courtenay) →			← E to W (E Courtenay to downtown) ←	
Time	Cycle bridge roadway	Cycle sidewalk	Walk bike - sidewalk	Cycle sidewalk	Walk bike-sidewalk
7-8					
8-9					
9-10					
10-11					

Non-cyclists (south)

	→ W to E on sidewalk (downtown to E Courtenay) →			← E to W on sidewalk (E Courtenay to downtown) ←			← Both ways →
Time	Pedestrians	Mobility scooters	Mnl	Pedestrians	Mobility scooters	Mnl	Boards / scooters
7-8							
8-9							
9-10							
10-11							

Comments

Figure 23: Sample 'Other Info Form' for 5th Street Bridge Counts

CVCCo 5th Street Bridge Active Transportation Counts – Other Info Form

Volunteer(s):			Page of
5th Street Bridge	Date:	Shift: 7am to 11am	Hour: 8am to 9am

DON'T FORGET TO CHANGE SHEETS EVERY HOUR, even if you still have empty rows!
One row for each passing non-vehicle/person – with 1 or more marks for each row, as relevant
If you are stuck on something (e.g. gender or age) go with your best guess or just leave blank

Counts	Female	Male	Youth cyclist	Youth pedestrian	Yth board/scooter	Senior cyclist	Senior pedestrian	Senior ebike	Non-senior ebike	Stroller	Comments
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
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26											
27											
28											
29											
30											

Comments