ROAD CONTROLLING AUTHORITIES FORUM (NZ) INC
Active Modes Infrastructure Group

Meeting at 9:00 on 24 November 2016
Level 28 - Majestic Centre, 100 Willis St, Wellington

PRESENT:

- Gerry Dance — Cycling Delivery Manager, National Cycling Team, NZTA
- Kirsty Horridge — Network Engineer, Hamilton City
- Tim Hughes — National Traffic and Safety Engineer, NZTA
- Simon Kennett — Senior Project Manager, National Cycling Team, NZTA
- Glenn Bunting — Network Manager, NZTA
- Kathryn King — Walking & Cycling Manager, Auckland Transport
- Ina Stenzel — Principal Specialist – Walking and Cycling, AT
- Steve Dejong — Traffic Engineer, Christchurch City
- Susan Lilley — Senior Transportation Planner, Dunedin City
- Richard Bean — Senior Engineer, NZTA
- Wayne Newman — RCA Forum Research & Guidelines Group (secretary)
- Rebecca Cunniffe — National Cycling Team, NZTA (11.30 - 1.30)
- John Lieswyn — ViaStrada Ltd (1.30 – 3.05)

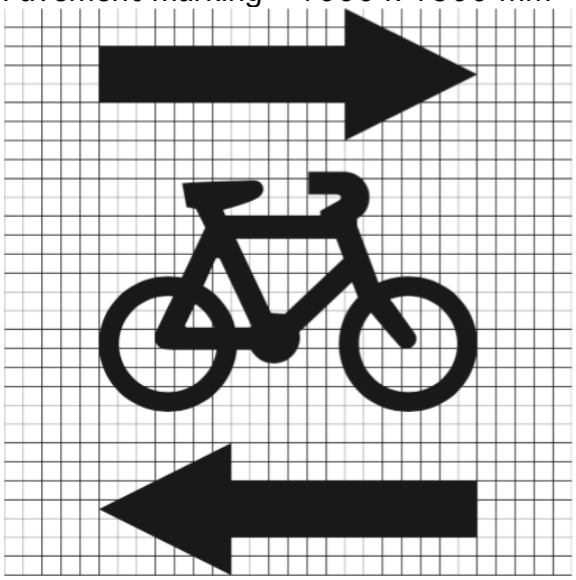
APOLOGIES

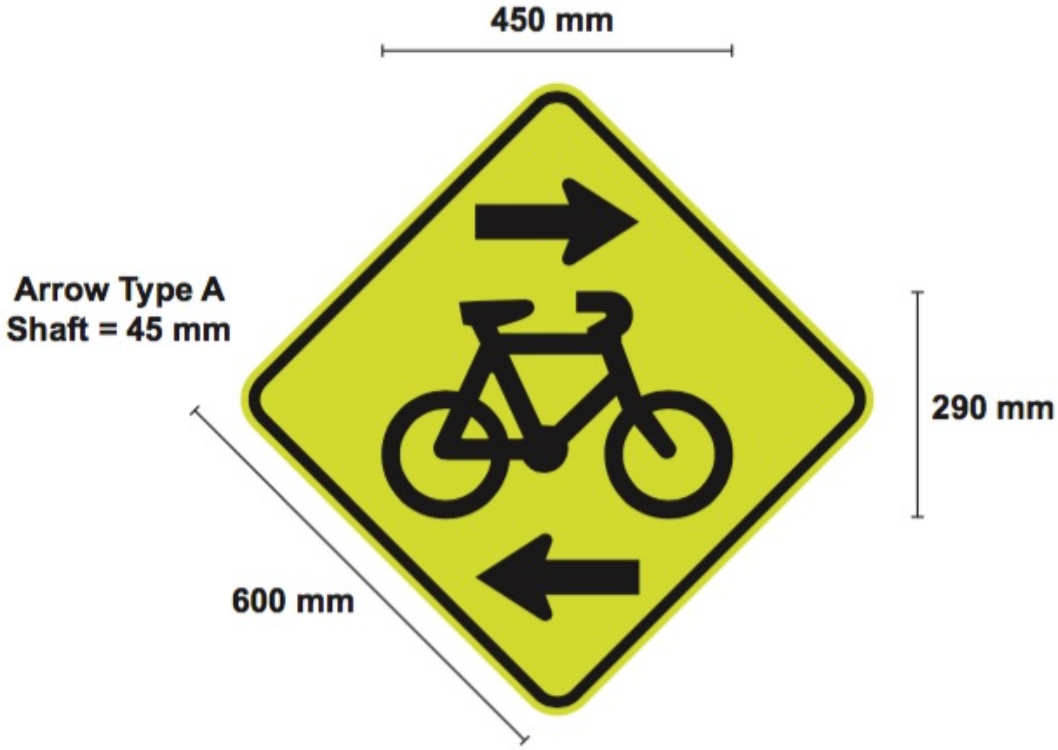
- Nathaniel Benefield — Lets Go Project Manager, New Plymouth District
- Claire Sharland — Asset Manager Transportation, Taupo District
- Sandi Morris — Transportation Planner, Palmerston North City
- Paul Barker — Safe and Sustainable Transport Manager, Wellington
- Jodie Lawson — Sustainable Transport Team Leader, Rotorua Lakes
- Claire Graham — Senior Specialist – Walking and Cycling, AT
- Nick Marshall — Senior Roading Engineer, Whangarei District
- Clare Cassidy — Planning Engineer, Transport, Tauranga City
- Simon Cager — Senior Project Engineer, Hutt City
- Rhys Palmer — Senior Asset Engineer – Transport, Nelson City
- Marni Ratzel — Team Leader, walking and Cycling, AT
- Glen Koorey — ViaStrada Ltd

ACTIONS

The Active Modes Infrastructure Group agreed:
A. To approve the pavement marking and sign below for use at vehicle entrances crossing cycle paths:

Pavement marking – 1000 x 1500 mm





(The scale of the arrows on the marking can be reduced to be closer to the proportions on the sign.)

B. The preferred colour specification for infrastructure for active modes is:

- green - Apple Green
- red - Signal Red.

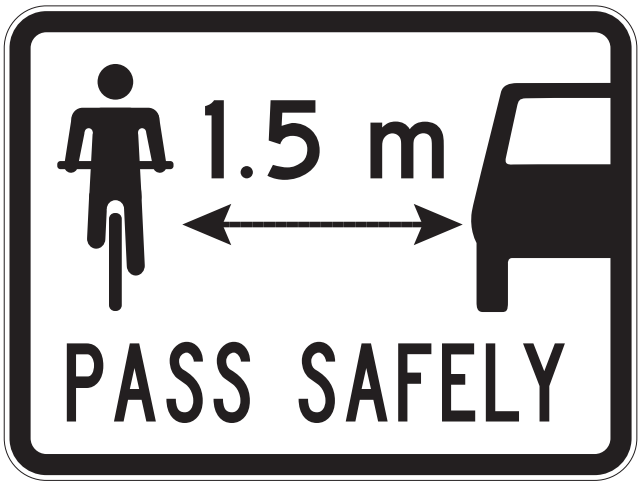
C. To approve a Regulatory Supplementary Sign 'TO CYCLISTS' for use with the TCD 11.4(5) stand-alone crossing and 'TO PEDESTRIANS AND CYCLISTS' for a Paired Crossing; and Regulatory Signage: 'LEFT, RIGHT or STRAIGHT AHEAD TRAFFIC GIVE WAY TO CYCLISTS' as appropriate.

D. To mock up and test variations in the simulator using the three options of "cyclists", "cycles" or the cycle symbol, "pedestrians" or the pedestrian symbol, for the proposed regulatory signage.

E. To develop and trial a standard advisory marking for safer speeds on shared paths to achieve a safe speed for shared paths that reduces the speed differential between cyclists and pedestrian users.

F. To approve the two advisory 'share the road' signs below, subject to expert comment from the manufacturer and further discussion of the merit of including a specified distance for a minimum overtaking gap. A mandated minimum overtaking gap of 1.5 m is admirable, but unenforceable and potentially counter-productive.

(a) Pass Safely Rural Sign – 1200 x 900 mm



(b) Pass Safely Urban Sign – 900 x 750 mm

G. To submit the Cycle Network Guidelines for the agreed consultation and ratification process for network standards and guidelines, and then properly promulgate them.

H. To approve proposing Rule changes:

- To require turning vehicles to give way to cyclists on separated cycleways crossing side-roads and pedestrians crossing side-roads;
- To allow cyclists to go straight ahead from a left-turn lane.

I. To forward the reports and recommendations from the trials of pavement markings in Auckland and Christchurch to G. Bunting in support of a Rule change to permit their use without supporting signage.

J. To approve a review the Christchurch City Manual of Cycling Signage with the objective of it being formally adopted as a national standard for Cycling Signage and fully incorporated into the Cycling Network Guidelines.

K. To approve for national use a Paired Crossing (TCD 11.4(5) cycle priority crossing located beside Zebra crossing) where all elements of the Zebra Crossing and of the TCD 11.4(5) crossing must be used, as well as the general information sign with the cycle symbol above 'WATCH FOR TRAFFIC'.

AGENDA

9.00	1.	Introductions, apologies and emergency briefing
9.05	2.	Actions from last meeting
9.15	3.	Entrance and crossing markings
9.45	4.	Supplementary signs for Give Way
10.00	5.	Speed limits
10.45	6.	Share the road signs
11.15	7.	Feedback on Cycle Network Guidelines
11.45	8.	Rules review
1.15	9.	AT pavement marking trial
1.30	10.	Omnibus progress report
1.45	11.	Way finding signs usage guidance
2.00	12.	EV, E-bikes and low-powered vehicle review
3.00	13.	KiwiRail level crossing design guidance
3.30	14.	Short-term cycle-friendly infrastructure trial options
3.45	15.	Other business
4.00	16.	Next meeting

NOTES

1. INTRODUCTIONS AND APOLOGIES

There were no introductions. The apologies were noted, with the recognition that the timing of the meeting was not convenient for more than half of the group. G. Dance gave a very thorough emergency briefing.

2. ACTIONS FROM LAST MEETING

1. G. Dance, S. Kennett and R. Bean – two options for markings at vehicle entrances crossing cycle paths were to be mocked-up and circulated for the chosen option to be signed off at this meeting. Two options for markings and two options for signs were circulated on 22 September. The signs and discussion were taken under Item 3.

2. G. Dance, W. Newman, S. Dejong –a submission from AMIG on electric vehicles in Bus Lanes was to be investigated.

   The meeting noted that the Commerce Select Committee is currently seeking submissions on the Energy Innovation (Electric Vehicles and Other Matters) Amendment Bill. The Bill amends the Land Transport Act 1998 and the Road User Charges Act 2012 to implement measures to encourage the uptake of electric vehicles (EVs), specifically by extending the road user charge exemption to include heavy electric vehicles and clarifying a bylaw-making power so that road controlling authorities may make bylaws to provide for EVs to have access to bus and high occupancy vehicle lanes. It also amends the Electricity Industry Act 2010 and the Energy (Fuels, Levies, and References) Act 1989 to allow the Energy Efficiency and Conservation Authority (EECA) to focus levy funding on the areas where the greatest impact can be made, as well as to improve the operation and administration of those levies, and the Electricity Industry Act 2010 to clarify how electricity industry legislation applies to secondary networks as a growing business model in the sector. Interested parties have until 1 February 2017 to respond.

   The meeting also noted that no research on the effect on bus schedules of these extra vehicles being allowed in the lanes has been presented, or any benefit-cost analysis that assesses the costs of the bylaw process, altered signage costs and impact on traffic efficiencies against the benefits from an increased take-up of electric vehicles.

3. G. Dance, W. Newman – were to discuss proposing IPENZ Transportation Group establish a sub-group on walking and cycling. Discussions between Dr G. Koorey, J. Ward and G. Dance have moved from the sub-group option back to the option of a single representative on AMIG. The logistics of resourcing participation of this representative have yet to be finalised.

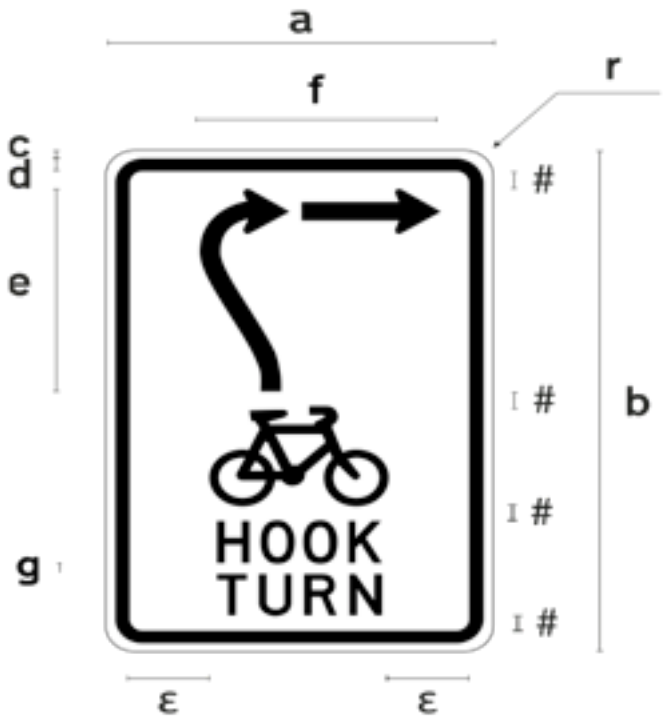
4. S. Dejong – was to circulate the specification used for Hook Turn sign.

The spec used for the Hook Turn sign was circulated on 31 August and was the same as that Gazetted on 25 May 2016 and circulated to AMIG on 26 May. See below.

Hook Turn 400 x 600

* All dimensions are in millimetres unless otherwise specified.

Code :	?
Rule :	?
MoTSaM :	?
EPS image :	Hook Turn 400 x 600.eps
GIF image :	
a :	400
b :	600
c :	10
d :	15
r :	30
e :	240
f :	250
g :	12
arrow shaft	21
cycle symbol	185 x 120
Letters :	50D
Legend :	Black
Background :	reflectorised white
Border and symbols :	Black



5. G. Dance, S. Kennett and R. Bean – two options for "Share the Road" signs in black and white, both with "Pass Safely", but a larger one with "1.5m" and a smaller one without "1.5m", were to be mocked-up. Two options were circulated on 22 September and were taken under Item 6.

6. G. Dance, S. Kennett, Dr G. Koorey –investigation of appropriate marking for a cyclist-crossing was to be included in the RUR research, to define the problem and what response might be most effective. This was taken under Item 8.

7. All members were to provide suggestions or examples of easy improvements for cycling that do not need formal Council resolution or bylaws to implement. No suggestions or examples were received. Taken under Item 14.

8. G. Dance, W. Newman, G. Bunting – were to discuss referring road-rail interface issues to a new group being established by the RCA Forum. Taken under Item 13.

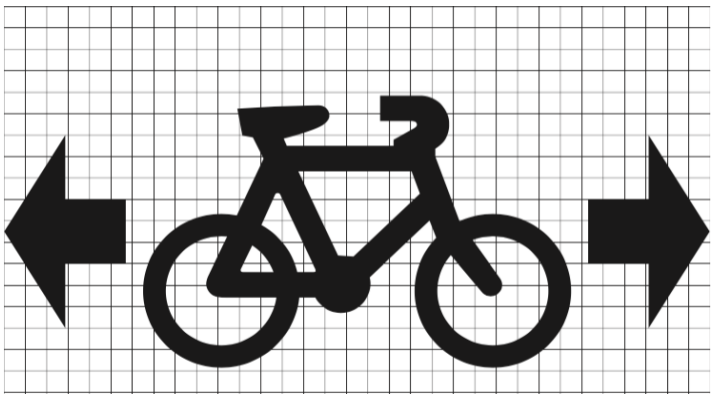
9. G. Dance, S. Kennett – were to discuss with J. Ward and H. Mackie a possible need for speed limits on cycle and shared paths to be included in the footpath cycling rule options research. Taken under Item 5.

10. S. Dejong – was to provide examples of Supplementary Signs for Give Way at cycle path intersections. Examples of five supplementary signs were circulated on 2 September and were taken under Item 4.

3. Entrance and Crossing markings

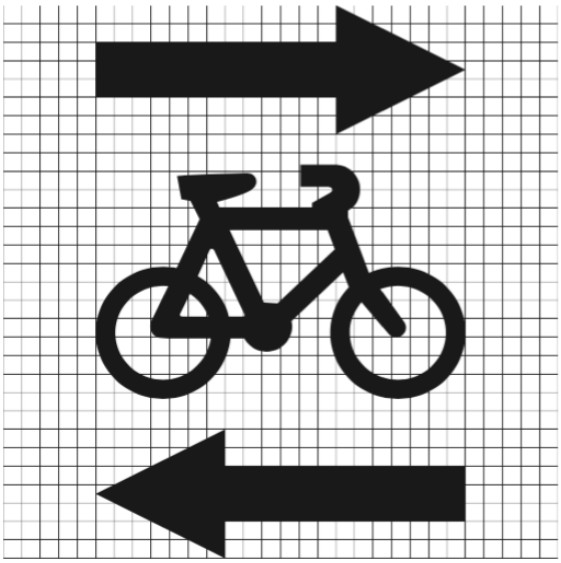
Two options for markings at vehicle entrances crossing cycle paths were mocked-up and circulated on 22 September for comment for the chosen option to be signed off at this meeting.

(a)



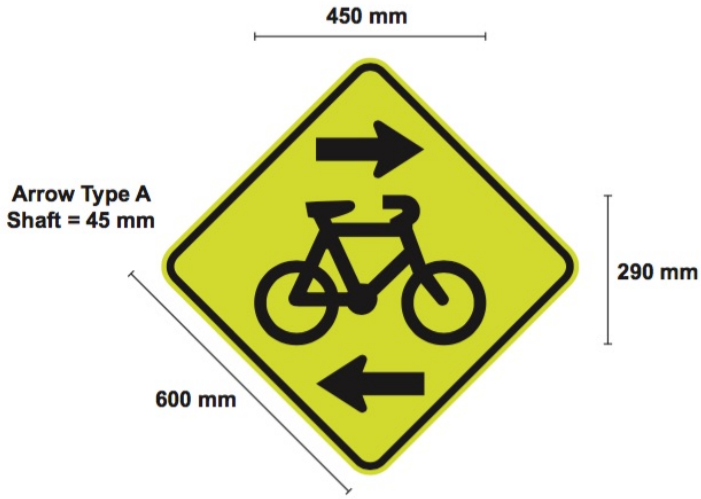
(1650 x 650 mm)

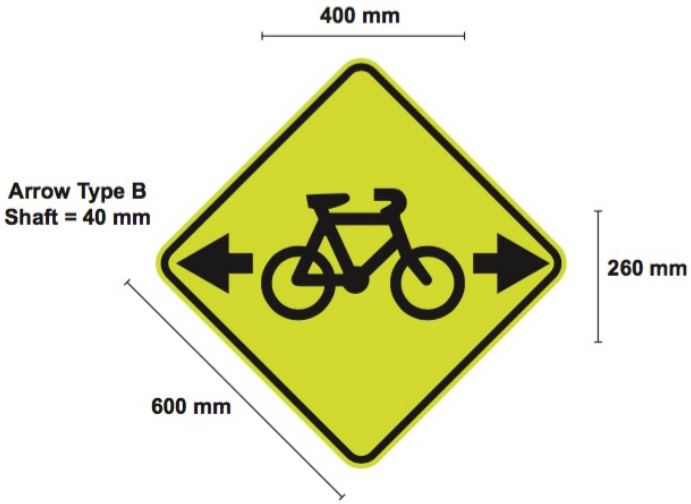
(b)



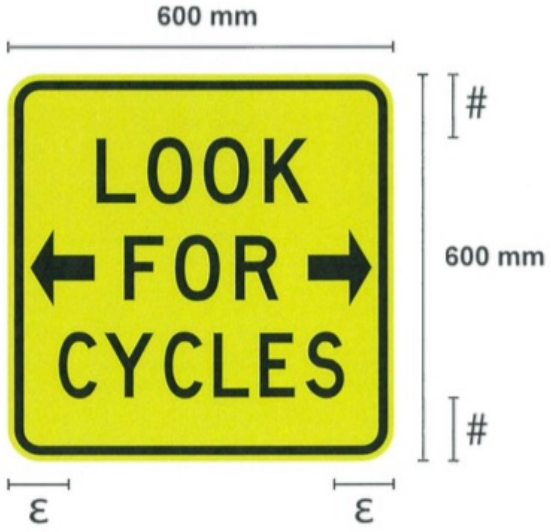
(1000 x 1500 mm)

Three options for signs were also circulated on 22 September:





Sign plate:	**600 x 600mm**
Cycle symbol:	**400 x 260mm**
Arrow:	**Type B, shaft 40mm**



Discussion

The pavement marking symbol was modified so that the wheels appear round. The reasons for this were:

- This marking will be used at driveways where the viewing distance is short and approach speed low, so that the elongated perspective of the standard road marking is not so important;
- The mock-up using the standard, elongated wheels, road marking symbol looked wrong;
- Using the standard, elongated road marking symbol takes up more space and the marking with the arrows above and below the cycle is about 2.5 metres tall. This makes the arrow on the top look a lot less significant than the arrow on the bottom, but it is the arrow on top that is arguably the most important.

The arrows are considered an important part of the marking, as they alert drivers to the fact that cyclists may be approaching from their left (when they might be inclined to look only for traffic coming from their right).

The principal concern is that this would create yet another cycle symbol template that could result in confusion for contractors and incorrect symbols being marked. It was also noted that whereas arrows above and below the symbol on the sign appear relatively small, because they fit into a lozenge shape, the arrows above and below the symbol in the pavement marking are large. This represents a lot of paint at every driveway.

Marking (a) has already been applied by AT and Christchurch City as being better suited to a single marking at a vehicle exit. NZTA and Wellington City have used marking (b) as being better able to be fitted into a 1 m wide stripe in a trial of a potential crossing marking undertaken on the Hutt Rd.

Wellington City put down green paint and various cycle symbol markings on the Hutt Rd shared-path in 2010. Overall the crash reduction results suggested that green paint (plus a marking) appears to be effective:

- Cycle/MV crashes 2005-2009 = 25
- Cycle/MV crashes 2011-2015 = 10

The previous meeting noted that the speed of entry is the critical consideration for cyclist crossings; a cyclist is able to enter a crossing too quickly for the average reaction time of motorists. Giving cyclists priority at crossings could exacerbate this risk and a distinctive marking that required both cyclists and motorists to slow down as they approached needed to be tested.

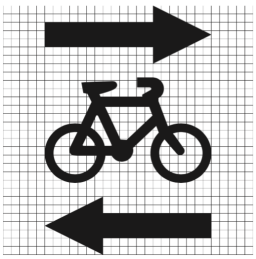
The current trial has looked at the effect of marking a series of 1 m wide stripes with 1 m separation across a wide vehicle exit. The trial has observed the effect of unclear priority on the behavior of motorists and cyclists. The preliminary finding is that the marking has made motorists more careful without making cyclists less careful:

- Before marking 32% of vehicles stopped before the cycleway
- After marking 68% of vehicles stopped before the cycleway.

The trial has shown, however, that the Emerald Green specification is too likely to darken and become dull and a brighter tone should be specified.

Decisions

The meeting approved pavement marking (b) and sign (a) for use at vehicle entrances crossing cycle paths. The scale of the arrows on the marking can be reduced to be closer to the proportions on the sign:



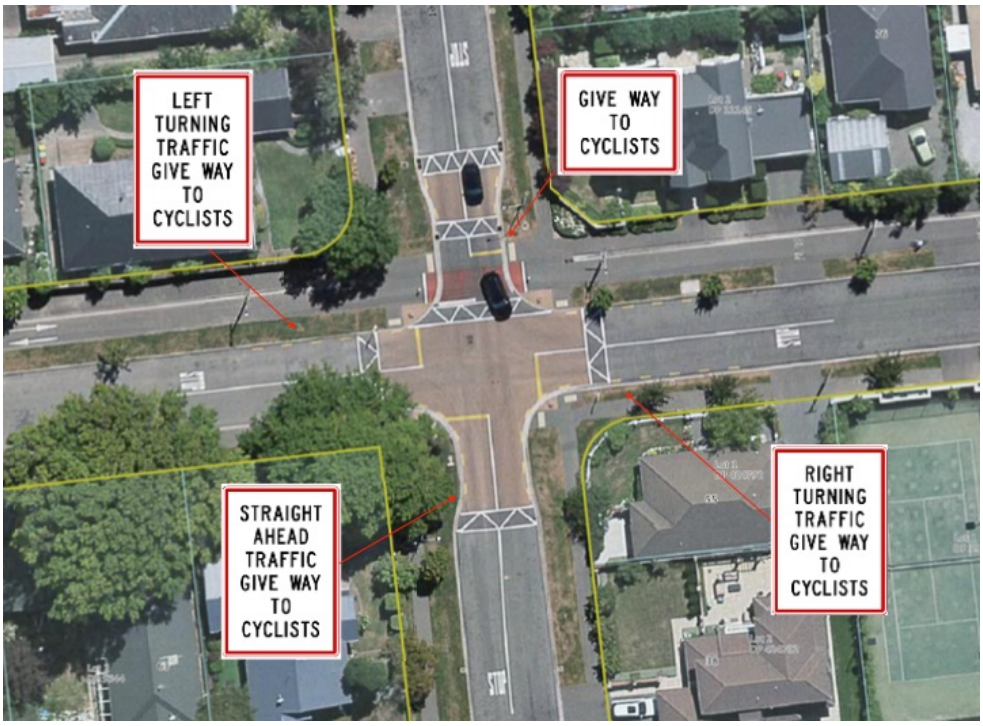
The meeting also agreed that the preferred colour specification for the green to be used on cycling facilities is Apple Green and the preferred red to be used on infrastructure for active modes is Signal Red.

4. SUPPLEMENTARY SIGNS FOR GIVE WAY

Five examples of Regulatory or Supplementary Signs for Give Way at cycle path intersections were circulated on 2 September. The supplementary 'TO CYCLISTS' has been installed on the Matai Street crossing in Christchurch City to inform motorists who they are giving way to. Prior to the installation of the supplementary sign there were numerous incidents of cyclists being cut off; following installation Christchurch City has not received a complaint.

The meeting agreed that the critical issue for the use of this supplementary is that it defines whom the motorist must give way to and could only, therefore, be used where no other traffic would cross.

Junction (4-way Stop) Cycle-priority Crossing TDC11.4(5)



The Matai Street West intersection with Harakeke Street is on the Christchurch Uni-Cycle major cycle route. The 4-way stop control has existed for years and so has the cycle path. To clarify to motorists that they are required to stop at the intersection and also give way to cyclists on the cycle priority crossing on the north side of the road, three of the Regulatory Supplementary signs indicated on the plan have been installed on separate poles near the Stop signs. The “Give Way to Cyclists” sign was not installed, as it would be confusing beside a Stop sign.

The meeting agreed that separate signage approved for intersections where motorists are required to also give way to cyclists on a cycle priority crossing at an intersection should be regulatory, rather than advisory.

After some discussion of preferences for using “cyclists”, “cycles” or just the cycle symbol, it was agreed that variations using the three options, as well as “pedestrians” or the pedestrian symbol, should be mocked up and tested in the simulator.

Decisions

The meeting agreed that the following should be approved:

- **Regulatory supplementary sign:** 'TO CYCLISTS' for use with the TCD 11.4(5) cycle crossing; and
- **Regulatory Signage:** 'LEFT TURNING, RIGHT TURNING or STRAIGHT AHEAD TRAFFIC GIVE WAY TO CYCLISTS.

5. Speed limits

The possible need for speed limits on cycle paths and shared paths was to be included in the research being done by Jeanette Ward and Hamish Mackie.

The Executive Summary circulated to the meeting did not address the issue.

The previous meeting noted that there is a very real risk that the design speed for a cycle path could be substantially less than its posted speed limit, as in most situations the path will not be separately posted from the road it is adjacent to.

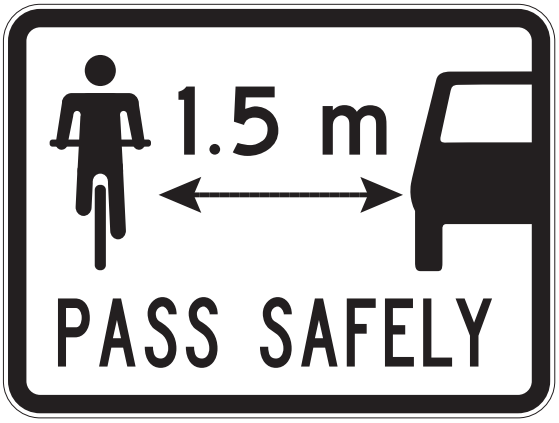
The take-up of e-bikes has been expected to introduce significantly greater speed differentials between users of cycle and shared paths. The research by ViaStrada on e-bike and low-powered vehicles has indicated that this is not as significant a risk as assumed for cycle paths. It is likely to increase the average cycling speeds only slightly.

The meeting agreed that there is a need to achieve a safe speed for shared paths that reduces the speed differential between cyclists and pedestrian users. It was noted that cyclists have limited means to judge their speeds and that fixed speed limits in Australia have not been successful. It was agreed that a standard advisory marking for safer speeds on shared paths should be developed and trialled.

6. Share the Road Signs

Two options for a "Share the Road" sign were circulated on 22 September:

(c) Pass Safely Rural Sign – 1200 x 900 mm



(d) Pass Safely Urban Sign – 900 x 750 mm

Discussion

The meeting agreed that the signs have merit, although the message on the 'urban' is not as strong; it suggests, but does not define, the safe passing distance. Having a dimension on the sign provides an educational aspect, but the 'urban' sign without the dimension is slightly less cluttered.

The names are slightly misleading and potentially confusing, as the version of the sign with no distance included is for roads where a 1.5m passing gap is not always possible and might be used on a low-speed rural road.

Decision

The meeting approved the two signs, subject to expert comment from the manufacturer and subject to the discussion under Item 8 of the merit of including a specified distance for a minimum overtaking gap.

7. Feedback on Cycle Network Guidelines

Feedback on the guidelines and input on what has worked well is a standing item for the agenda of meetings.

The meeting noted that the greatest deficiency of the guidelines at the moment is that they are not being used by many consultants and are not sufficiently well-known across the sector. The meeting agreed that the Cycle Network Guidelines need to go through the agreed consultation and ratification process for network standards and guidelines, and then be properly promulgated.

8. Rules review

Minimum Overtaking Gap

The meeting noted that this is a minor issue, but involves a high risk of fatality, especially on rural roads and is seen as a significant impediment to cyclists' perception of safety on the road and the uptake of cycling. The research raised issues of enforcement, education and practicality. The meeting agreed that a mandated minimum overtaking gap of 1.5 m was admirable, but unenforceable and potentially counter-productive.

Rule 1: Priority for cyclists on separated cycleways crossing side-roads

The meeting agreed that giving differing priority to cyclists on separated cycleways at signalised and unsignalised intersections would be potentially confusing to motorists. Requiring turning vehicles to give way on all occasions was the least complex or confusing approach, but cycleways crossing side-roads would need to be appropriately marked.

Rule 2: Priority for pedestrians when crossing side-roads

The meeting noted that a Rule change would be needed to allow a trial, as recommended, and that adopting proposed Rule 1 without Rule 2 would create an anomalous situation in which pedestrians on a shared path would not have the same priority as cyclists. The meeting agreed that requiring turning vehicles to give way on all occasions was the least confusing approach, but crossings on side-roads would need to be marked.

Rule 3: Allow cyclists to go straight ahead from left-turn lane
The meeting noted that this is common practice and would generate no obvious implementation issues. The meeting agreed that a change to the RUR to allow cyclists to go straight ahead from a left-turn lane be supported.

Rule 4: Allow cyclists to pass moving traffic on the left
The meeting noted that this is common practice and would generate few new implementation issues, but is a practice with a number of recognised risks. The meeting also noted that this proposed Rule change would permit Rule 5, which is not recommended. It was agreed that a change to the RUR to allow cyclists to pass moving traffic on the left should not be supported.

Rule 5: Allow cyclists to lane split to filter to the front of a queue of traffic
The meeting agreed that there should be no change to the RUR to allow cyclists to ride between two lanes of traffic to filter to the head of a queue.

Rule 6: Allow cyclists to proceed at intersections when faced by a red signal
The meeting noted that there was already increasing concern at cyclists turning left and continuing across the top of T intersections through red signals. The meeting noted that a Rule change would be needed to allow a trial, as recommended, and agreed that the proposed Rule generated an unacceptable risk for crossing pedestrians and should not be supported.

Footpath Cycling
The meeting noted that wheel size has been used to restrict footpath cycling to younger children, but increasing the wheel size to include a larger portion of children between the ages of 6 and 12 years old (by increasing the limit to 500mm) would inevitably allow some adults to cycle on footpaths.

The meeting noted that there is widespread public acceptance of children under 12 years old being on footpaths, but not teens or adults, and there are increasing issues with bikes, skateboards and scooters on footpaths. The meeting noted that scooters are being adopted as the mobility option of choice in preference to bikes by increasing number of children and teens.

The meeting agreed that anyone over 12 years old should not be legally allowed to cycle on footpaths. On allowing pedaled mobility devices and vulnerable adults to cycle on footpaths, both exemptions would entail issues of identification and enforcement. The meeting noted that a Rule change that generated an unacceptable risk for pedestrians on footpaths should not be supported for the same reason as a proposed Rule change that generated an unacceptable risk for pedestrians on crossings.

9. AT pavement marking trial

The meeting noted that the trials in Auckland have been completed. The Christchurch trials indicated markings have an initial cost less than 20% of signs. The Auckland trial produced no observed problem behaviour and most survey respondents reported readily understanding the markings, but

along-side railway lines and specifically where they intersect with level crossings.

The meeting noted that ALCAM is not an effective risk assessment tool for pedestrian and cyclist crossings, Part 9 of the TCD Manual provides no guidance on these, and current practice, as in the use of mazes, has been shown to be ineffective.

14. Short-term cycle-friendly infrastructure trial options

Following a request from Wellington for suggestions for easy improvements, such as marking a wider uphill shoulder, ideas were invited at the previous meeting for improvements that can be made without requiring formal Council resolutions or a bylaw to put into place.

The meeting agreed that care must be taken to avoid making a situation worse or appearing to waste public money in introducing cycle-friendly infrastructure improvements.

15. Other business

The meeting noted that Christchurch City is:

- removing delineators and replacing them with a modular black and yellow plastic lane separator; and
- preparing to trial directional signals for cyclists.

The meeting also noted the trial of a paired crossing with a cyclist priority crossing beside a zebra and agreed that a Paired Crossing (TCD 11.4(5) cycle priority crossing located beside Zebra crossing) should be approved for national use. All the elements of both crossings must be used for a paired crossing. This would include a new Regulatory supplementary sign**:** 'TO PEDESTRIANS AND CYCLISTS' for a Paired Crossing, as well as the general information sign with cycle symbol above 'WATCH FOR TRAFFIC'.

16. Next meeting

The meeting noted W. Newman will be absent between 9 March and 5 April 2017 and agreed to meet next in mid-April.