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# Cycle Paths at Signalised Cross Intersections



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**Pathways are great!**



**But what now?**



# Presentation Outline



- Operational concepts

- Legal situation



- Operating cycle signals

- Phasing diagram example



- Project considerations

- Conclusions



- Recommendations

# Operational Concepts



- Cycle Signals
  - Separate signal for cyclist
  - When cyclists have green, motorists are stopped
  - When motorists are turning, cyclists are stopped



- No Cycle Signals

- Cyclists utilise pedestrian signals (or look at signals for parallel traffic)
- Motorists turn across the path of cyclists
- The 'common solution'
- **Not a safe practice**





**Cyclists and  
Motorists in  
Conflict**

# The Legal Situation



- Right of Way

- At signals, turning motorists must give way to pedestrians
- But cyclists entering intersection from pathway do not have right of way over turning motorists
- Traffic Regulations 1976 (until Feb 05) were explicit
- Road User Rule is somewhat ambiguous and this may be clarified in a future amendment



## The Legal Situation cont'd



- Pedestrian Signals

- Pedestrian signals apply to pedestrians only and not to cyclists



(2) While a special signal for pedestrians indicates a green walking human figure symbol, pedestrians, riders of mobility devices, and riders of wheeled recreational devices may,—

(a) if facing the signal, enter the roadway to cross towards the signal; and



- Cyclists using green pedestrian signal do not have right of way over turning motorists





**Motorists give way to pedestrians**

**and have right of way over cyclists**

TURNING TRAFFIC GIVE WAY TO PEDESTRIANS

2 Mt Maungaul Whakatane



# Operating Cycle Signals



- Turning motorists and cyclists from pathway are ‘conflicting movements’

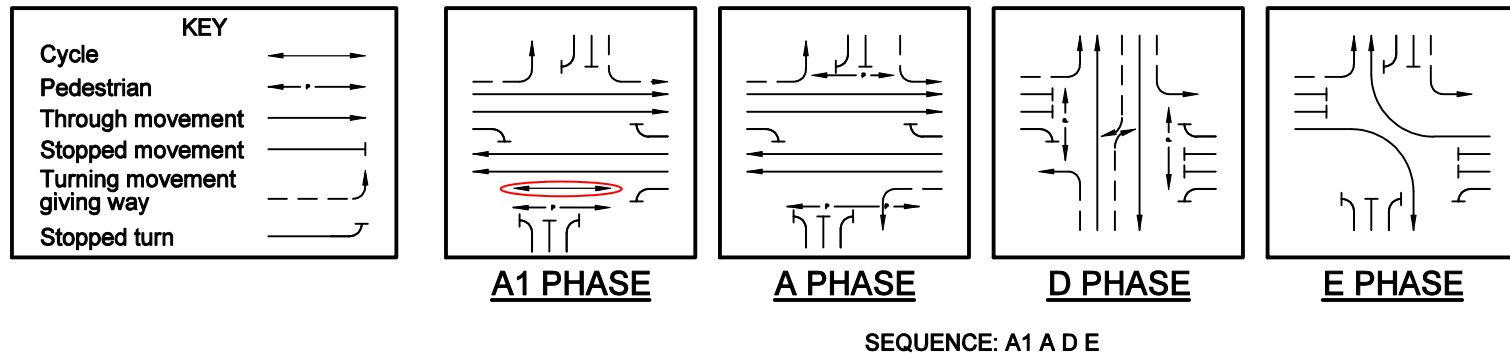


- Separate phases are hence required
  - Phasing more complex and less efficient
  - Reduced LOS for turning motorists
  - Reduced LOS for straight ahead cyclists

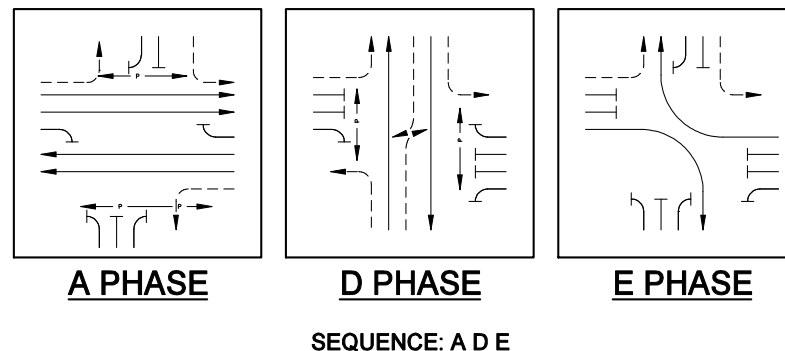


# Phasing Diagram Example

- With two-way cycle path on south side

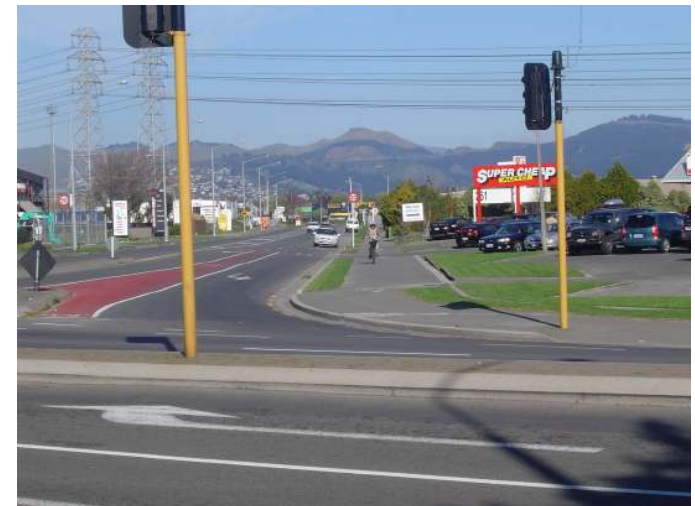


- With cyclists on the carriageway

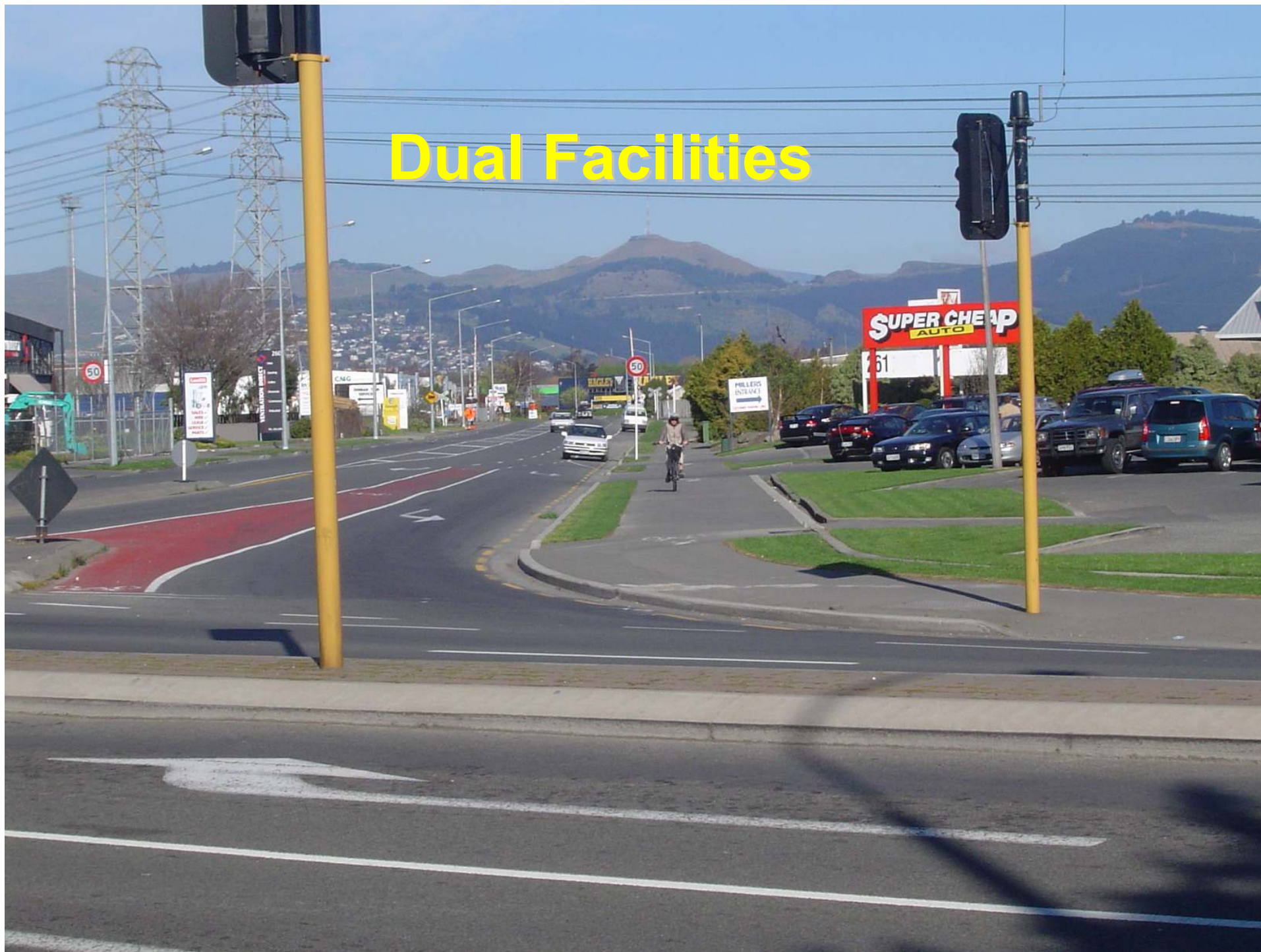


# Project Considerations

- Where signalised cross intersections are present, should pathways be provided?
  - On-street treatments (i.e. cycle lanes) might be more widely accepted
  - Or have dual facilities (both pathways, catering for inexperienced cyclists, and cycle lanes, catering for more capable cyclists)
  - Consider off-road paths returned on-road prior to intersections (SWOV 2004)



# Dual Facilities



# Conclusions



- Current practice of not providing cycle signals questionable
  - Legal situation reverse to user perception
  - Safety issue (turning motorists can't even cope with slower pedestrians)
- Cycle signals reduce LOS
  - For both motorists and cyclists
- Are pathways the right concept?
  - Assess on case-by-case basis



# Recommendations



- Land Transport NZ to review legal situation
  - Should pedestrian signals apply to cyclists?
  - Are cycle signals required?
  - Should straight ahead cyclists have right of way over turning traffic?
  - Should filter turning through cyclists coming from pathway be permissible?
- Industry to agree on best practice
  - Assist and provide guidance to legal review
  - Review existing installations



# Thank You!



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