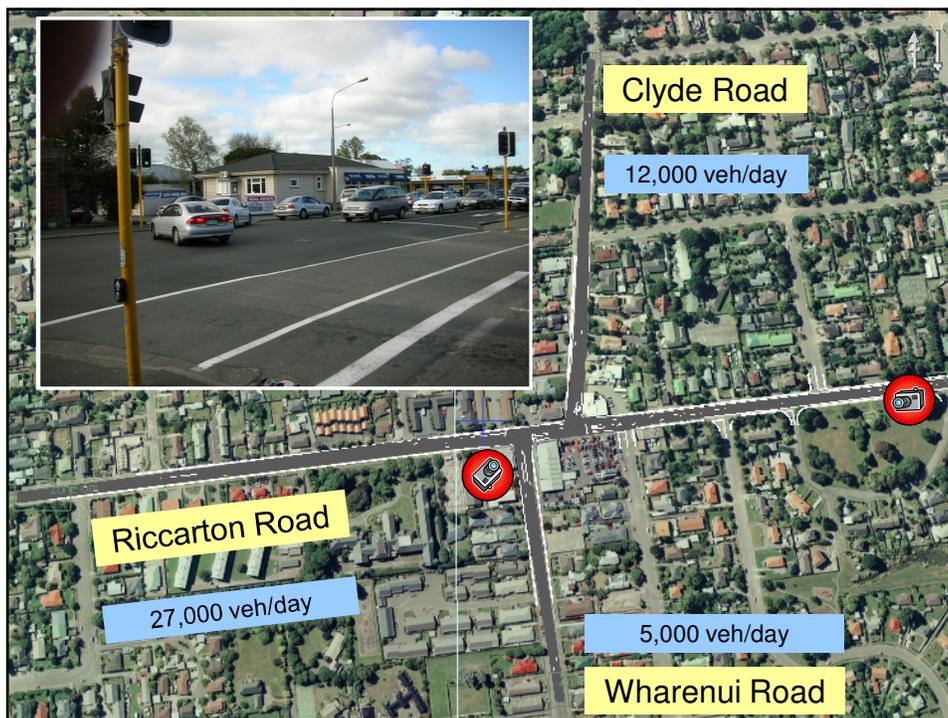




Making a congested offset signalised T intersection work

Presented to: SNUG Workshop 2006
Prepared by: Axel Wilke (Traffix)
Bill Sissons (Baseplus)
Client: Christchurch City Council
Date: 15 November 2006



Mid Block Capacity Exceeded

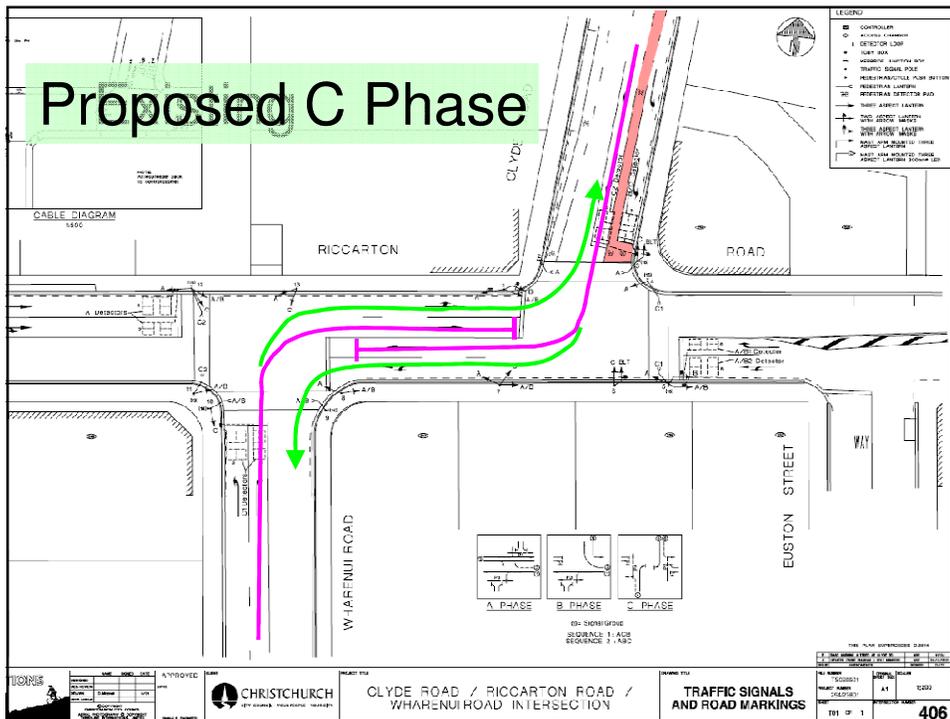


Ⓜ Not all side street traffic can enter mid block

Ⓜ Queues then blocking through movement



Proposed C Phase





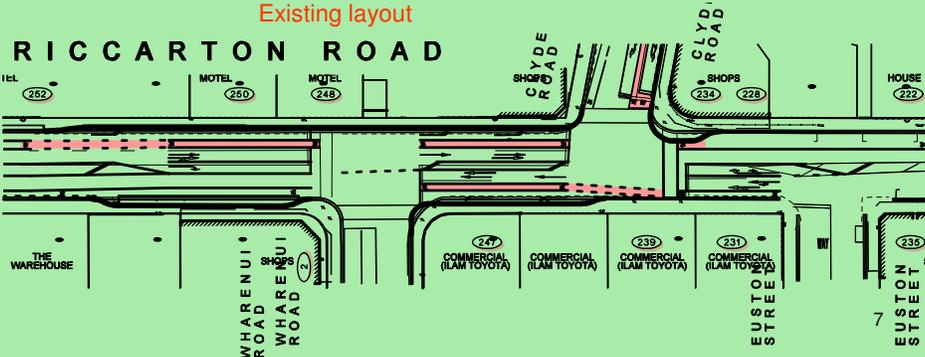


Proposed Layout



- Add exclusive left turn lanes
 - i.e. reduce through lanes from 2 to 1
- Separate through cyclists and left turners

Existing layout



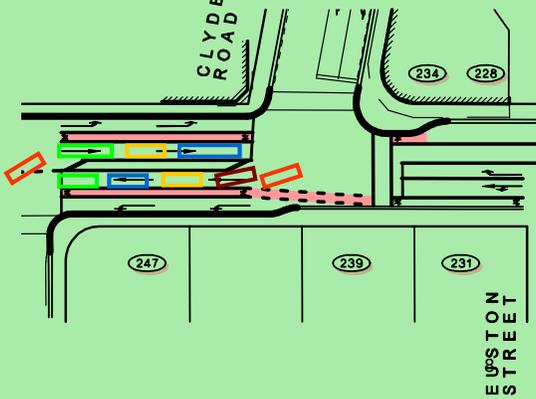




SIDRA Modelling Problems



- Can model one T intersection at a time only
- Cannot assess queuing on departure side
- Through traffic stops at red light
- Side street traffic fills up mid block through lane
- Eventually left turners are blocked by through traffic
- Or through traffic blocked



Use Microsimulation



- 🚶 Microsimulation (e.g. Paramics) allows to:
 - 🚶 Simulate more than one intersection
 - 🚶 Model the interaction of adjacent intersections
 - 🚶 View visual output
- 🚶 SCATS and Paramics
 - 🚶 FUSE interface connects Paramics and WinTraff
 - 🚶 Hence, SCATS controls the intersection operation
 - 🚶 Simulated operation should match actual operation

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Paramics Movie



- 🚶 Comparing Existing and Option



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Microsimulation Outcomes



- ④ Confirmation that mid block capacity is not exceeded
- ④ Overall intersection efficiency improvement
 - ④ am peak 27% travel time improvement
 - ④ pm peak 35% travel time improvement
- ④ Improvement for Riccarton Road travel times

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Recommendations



- ④ Use modelling software appropriate for the task
 - ④ Don't use what you've got when it's not appropriate
 - ④ Engage others when required
- ④ Be aware of the limitations of different software packages
 - ④ Avoid a 'black box' approach

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Thank you



 Any questions?

 **Contacts** (updated e-mail addresses)

 Axel Wilke axel@viastrada.co.nz

 Bill Sissons SissonsB@ap.aurecongroup.com