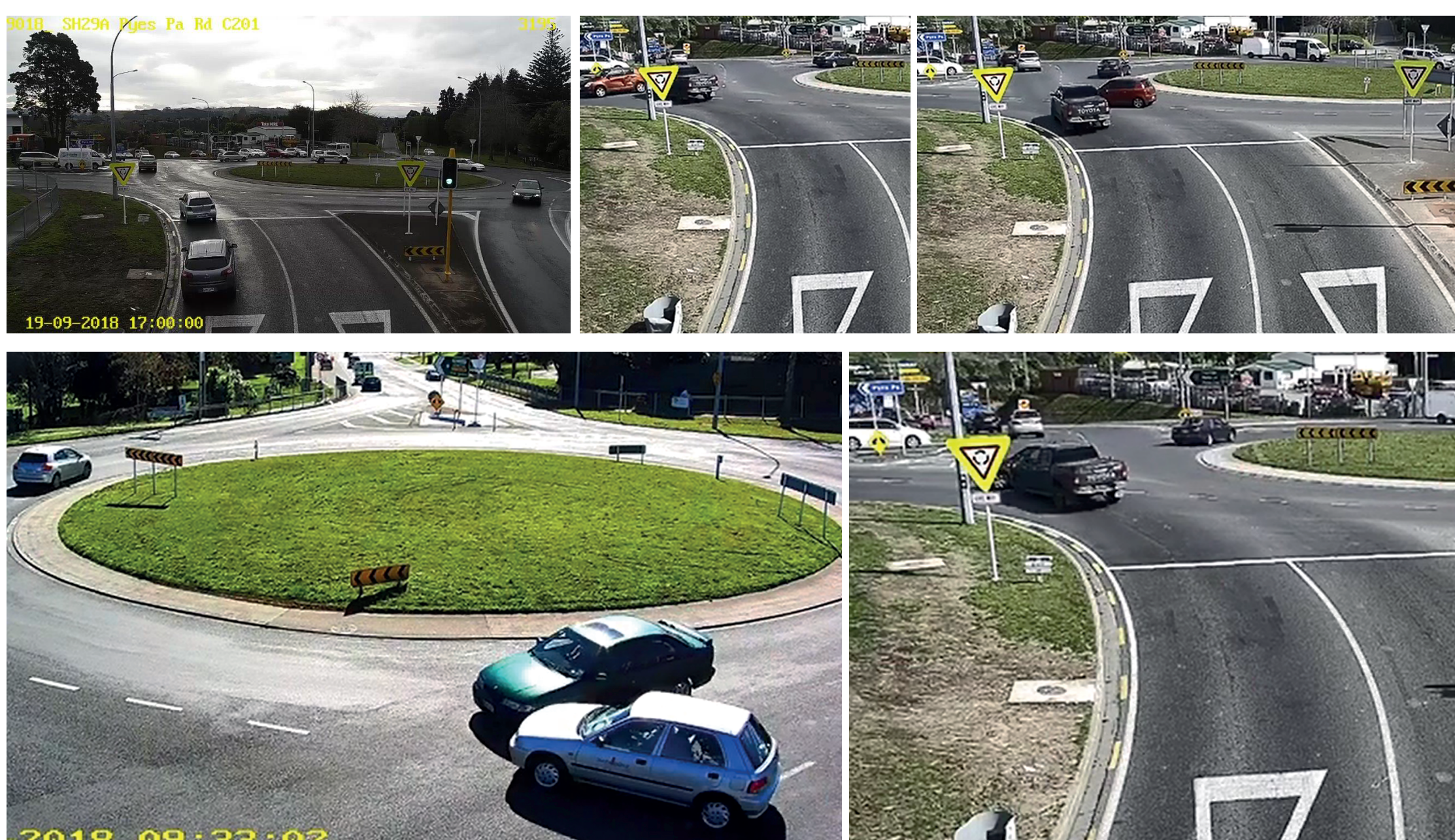


1. NETWORK PROBLEM

- Unequal flows at state highway roundabouts
- What can we do to balance?
- Models showed roundabout metering provided efficiency benefits
- Designed and installed 3 aspect signal control to TCD rule
- Communications explaining operation
- Start up 17th September 2018

2. OUCH! NEW PROBLEM

- Barks Corner metering on 2 approaches
- Drivers entering roundabout faster than prior to metering
- Drivers not giving way at limit line and crashes occurred
- Reported near misses
- Received safety feedback from school bus drivers
- After 4 days of operation new signals turned off due to safety concerns
- Turned off 20th September 2018



3. WHY DID THIS HAPPEN?

- Have not had issue at Auckland installations
- Did we do something wrong?
- Is Tauranga different? If so why?
- YES – Tauranga is different



4. WHY IS TAURANGA DIFFERENT?

- 3 fully signalised roundabouts in operation, drivers are accustomed to having a green signal to enter the roundabout
- 2 of the fully signalised roundabouts are on the same state highway as Barks Corner
- Some drivers interpreted the green signal to mean that they had right of way to proceed into the roundabout without giving way
- Social media feedback showed a mixed understanding.

IF IT ISN'T UNDERSTOOD THEN IT ISN'T SAFE.

5. WHAT NOW?

- Research options that don't have a green signal to determine if this will provide a better option for Tauranga
- Australia has 2 aspect roundabout metering
- Red and yellow only – OFF when the green would normally show
- Agreed that the 2 aspect option is the Tauranga solution

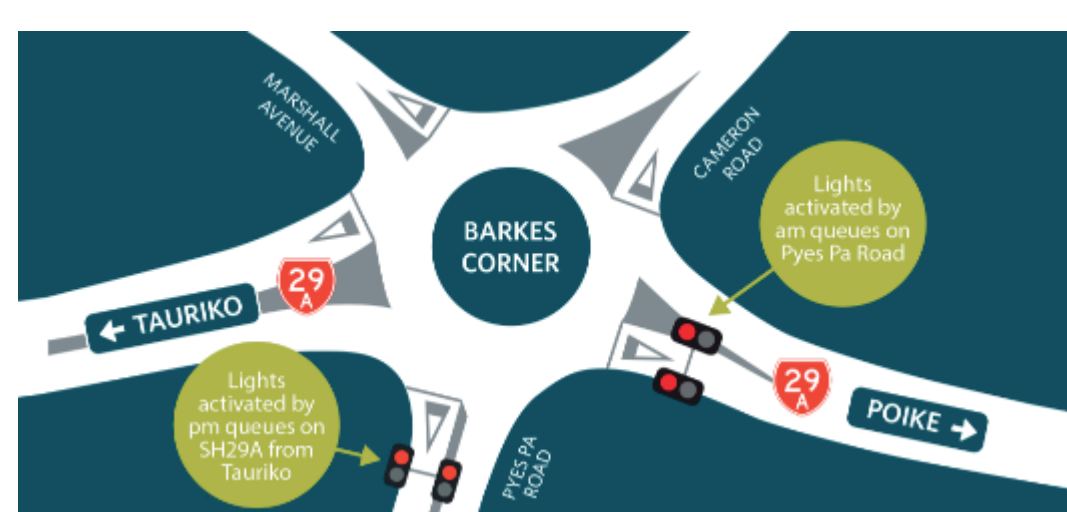
IF YOU WANT TO TRY SOMETHING NEW SEEK A GAZETTED TRIAL

TWO-ASPECT ROUNDABOUT TRAFFIC SIGNAL METERING

6. REDESIGN / INSTALL / MONITOR

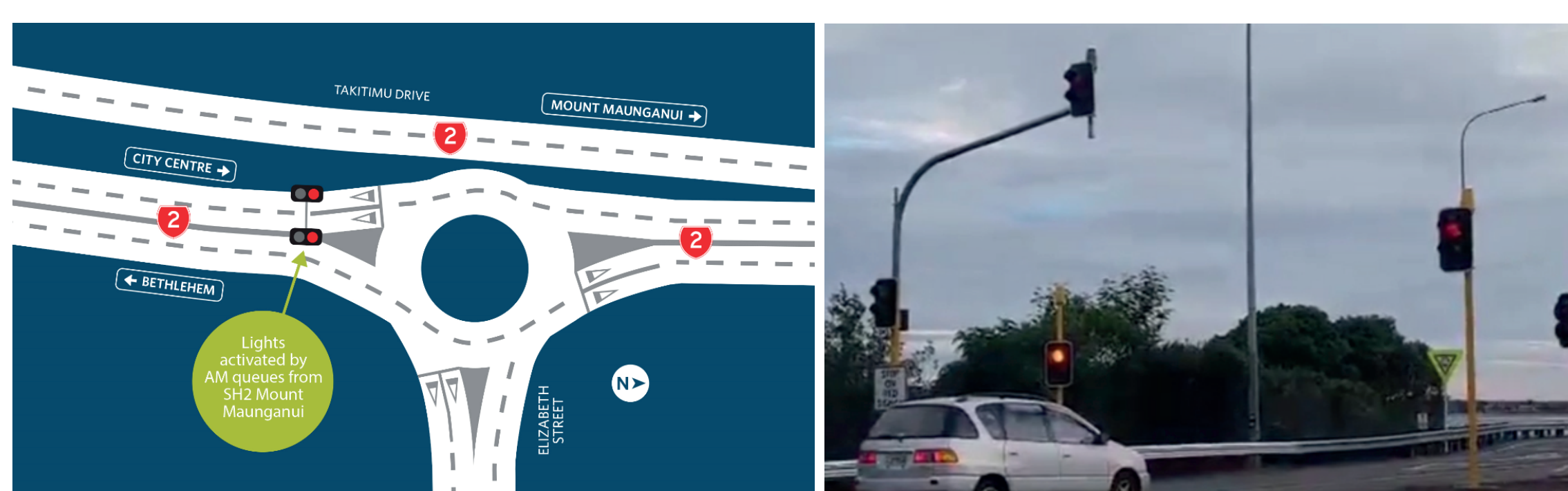
Barks Corner

- Two approaches
- AM and PM peak metering
- Start up 12th December 2018



Elizabeth Street

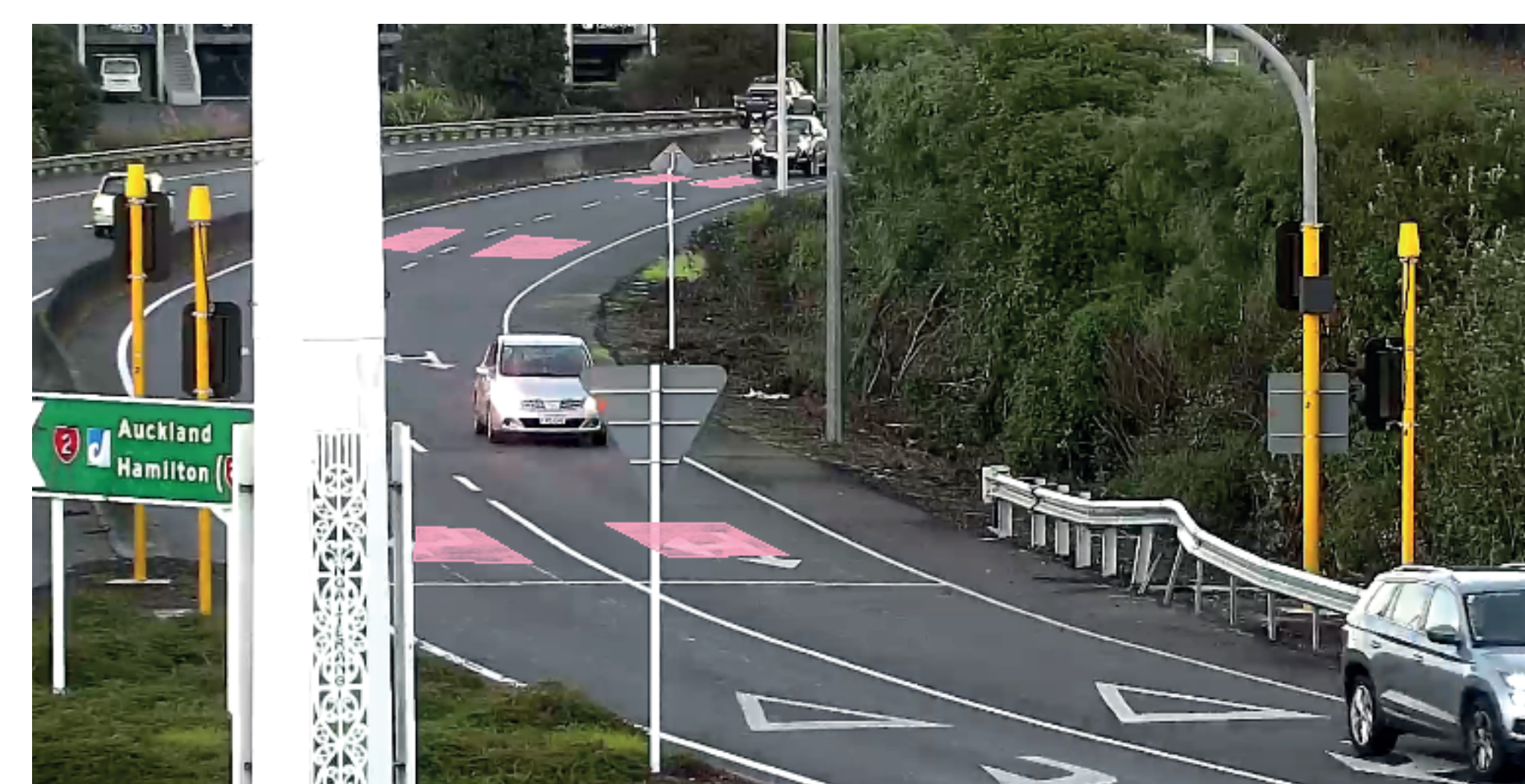
- One approach
- AM peak only
- Queue back risk solved by special SCATS routine
- Start up 11th April 2019



7. RESULTS

- Solved safety concerns
- Driver behaviour back to normal at limit line
- Elizabeth Street queue and saturation detection to address peak period "surge" and potential to affect SH2 northbound flow
- Metering benefits show reductions in travel times as expected with up to 3 minute improvement at Elizabeth Street for southbound traffic with minor increase in delay for metered approach
- No crashes recorded during metering operation

YAY IT WORKED



8. SO WHAT HAPPENS NOW?

- Trial end April 2020
- Monitoring report submitted
- Trial sites remain permitted locations
- TCD rule amendment if determined successful if determined unsuccessful trial sites removed