



NZ TRANSPORT AGENCY  
WAKA KOTAHI

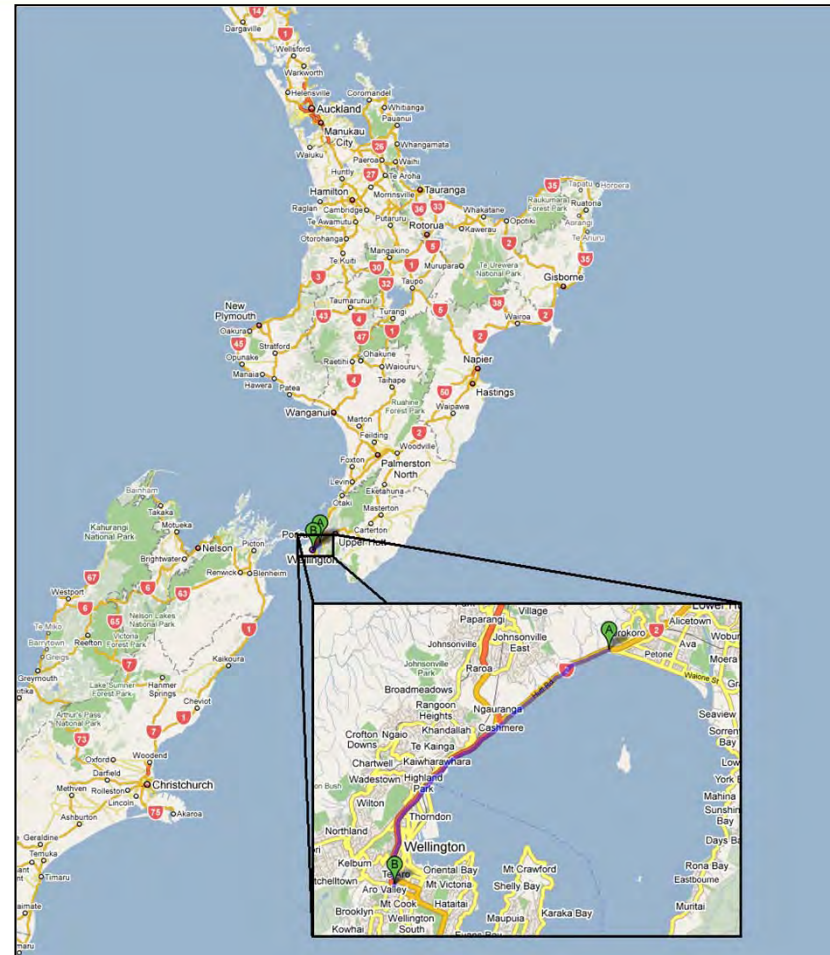
# Petone to Terrace Tunnel Advanced Traffic Management System (ATMS)

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# Background

- The project site is approximately 11km long
- Situated on SH2 and SH1 between Petone and Terrace Tunnel
- Total Cost, \$13.9M
- AADT >80,000 VPD at Ngauranga Interchange



# Background

- State Highway between Petone and Terrace Tunnel experience's congestion, often from: -
  - Demand exceeding capacity
  - Planned events
  - On-ramp merging
  - Unplanned traffic incidents

# Background

- Effects of congestion to the network: -
  - Delays
  - Increases driver stress and frustration
  - Increases operating vehicle costs

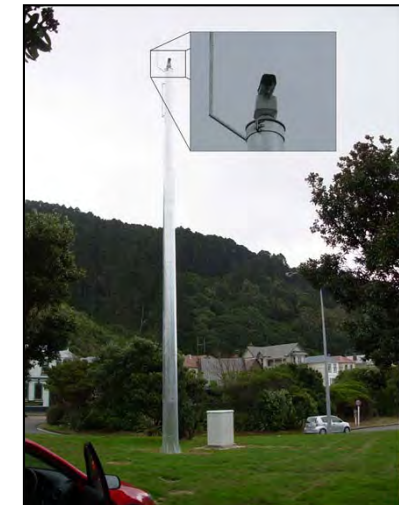
# Background

- An initial Advanced Traffic Management System (ATMS) installed on Ngauranga Gorge during 2001.
- Benefits from the initial ATMS include: -
  - Improved incident response times.
  - Inform drivers of real time traffic conditions.



# Scope of the project

- To install the following devices: -
  - Closed Circuit Television (CCTV) Camera
  - Variable Message Signs (VMS)





# Scope of the project

- Variable Mandatory Speed Signs (VMSS)



- Lane control signals



- Physical barrier
- Automated incident detection device

# Scope of the project

- The infrastructure to support the field devices includes: -
  - Trenching
  - Ducting
  - Fixing cable ladders on structures
  - Installation of fibre optic and power cables
  - Installation of cabinets and junction boxes
  - Gantries
  - Camera poles/fixings



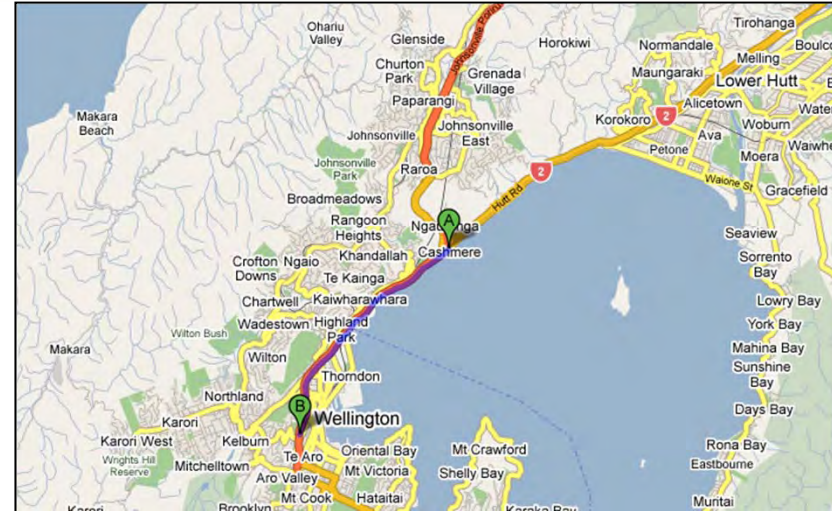


# Goals

- Goals of the ATMS equipment were to: -
  - Manage the traffic flow
  - Identify the problems on the highway rapidly
  - Alert road users with real-time information
  - Match the traffic speed to conditions
  - Provide a sustainable asset

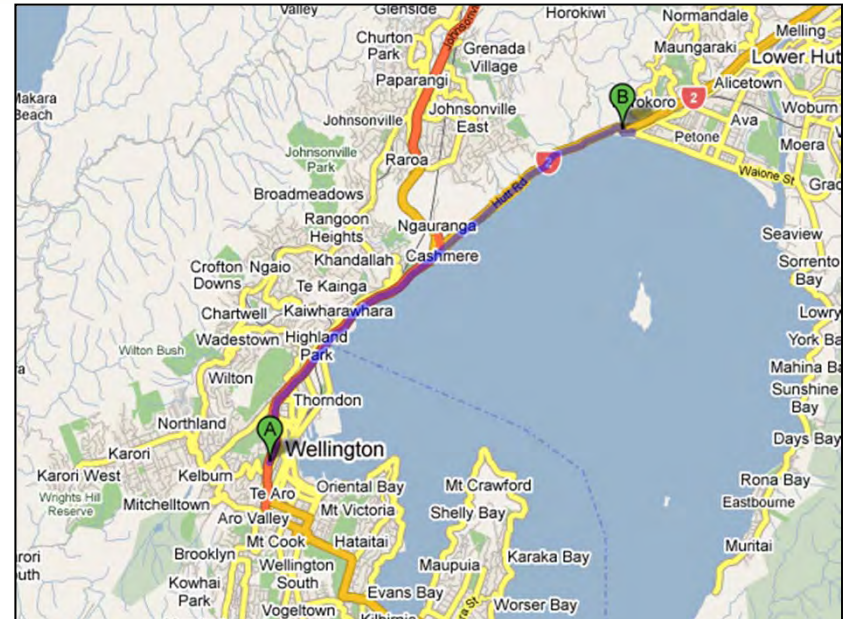
# Project Delivery

- Project split into two phases
- Tight project delivery date
- Works for the First Phase includes: -
  - Installation of CCTV cameras between Ngauranga and Terrace Tunnel
  - Infrastructure to support CCTV cameras and future devices between Ngauranga and Terrace Tunnel



# Project Delivery

- Works for the Second Phase includes Installation of: -
  - CCTV cameras between Petone and Ngauranga
  - VMS
  - VMSS
  - Lane Control Signals
  - Physical barriers
  - Automated incident detection devices
  - Infrastructure



# Results

- Phase 1 has been completed
- Phase 2 is currently out for tender
- There is CCTV coverage between Ngauranga and Terrace Tunnel
- NZTA is able to monitor this section of State Highway closely



# Results - recent use of the ATMS: Truck Protests 4<sup>th</sup> July 2008

- Truck Drivers protest
- NZTA were able to track the progress of the convoy
- Distributed real-time information out to various organisations including the media
- Alerted road users as to the real time traffic delays

# Results – Future Plans

- Agreement between NZTA and Wellington City Council to manage traffic cooperatively
- Future plans will be to: -
  - coordinate NZTA and Wellington City Council traffic management systems
  - find a location where the traffic management system will be held





Thank you