Introduction

SH1 is New Zealand's most significant highway, and in combination with the SH29 route to Tauranga, they provide a vital link in the continuing growth of the key economic areas of Auckland, Waikato and Bay of Plenty.

With the completion of the Waikato Expressway in 2020, the SH1/SH29 route will become busier. To cater for the increased use of this corridor by freight, commuter and tourist traffic the NZ Transport Agency is investing in improvements to this route. The section of SH1 between Cambridge and Piarere is an important link within this overall network and the long-term form of SH1 between Cambridge and Piarere (including the SH1/SH29 intersection) needs to be decided.

What do we want to achieve?

- Reduce the number of crashes causing deaths and serious injuries.
- Improved customer experience (e.g. experiencing consistent journey times every time you travel).
- Improve network resilience by reducing unplanned road closures caused by crashes, slips, spills and general maintenance.
- Improve local access to community features (like lakeside reserves).

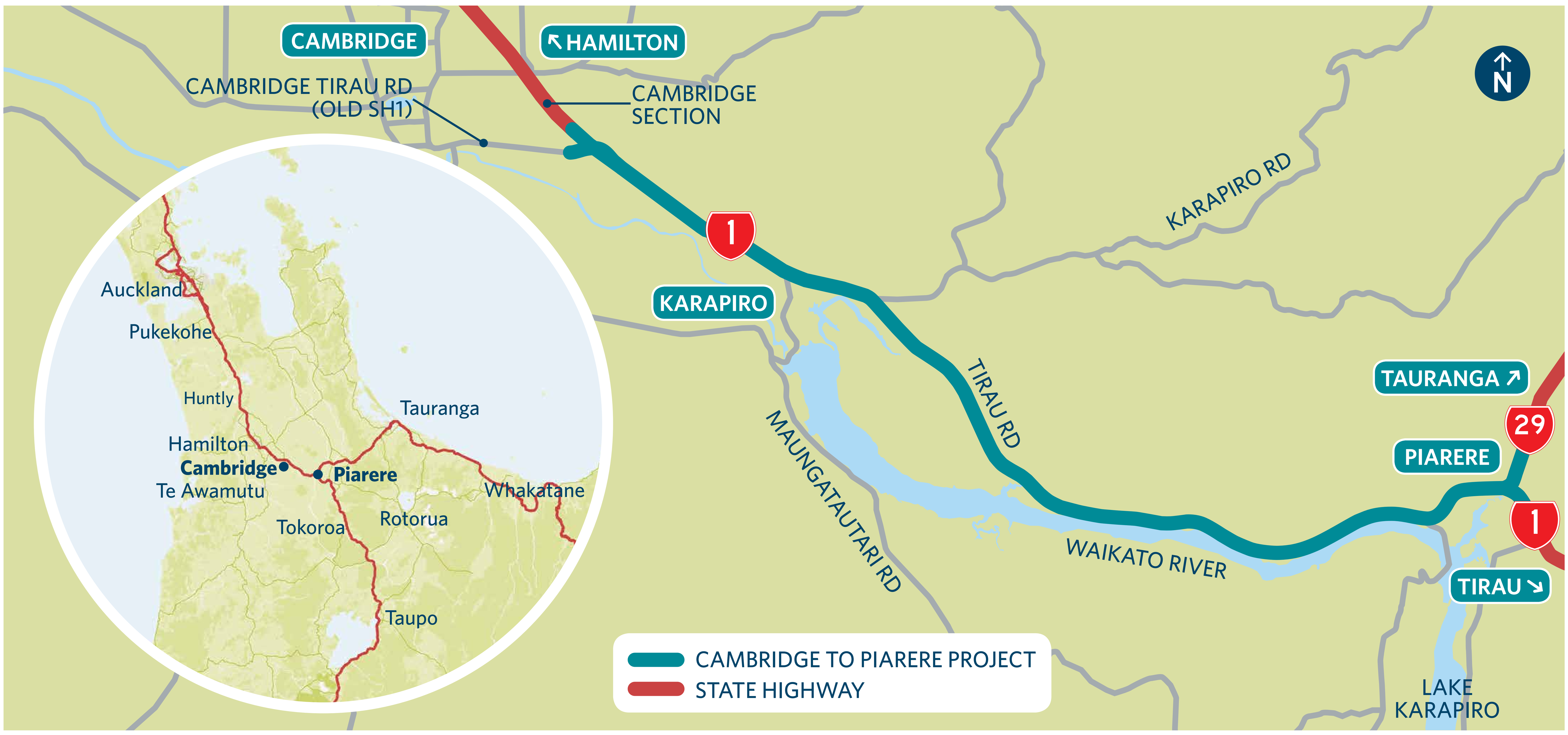
The problem

There are two primary matters to address:

Problem 1: Competing priorities between local access and high volumes of SH1 traffic contributing to crashes and harm.

Problem 2: In the future, unacceptable levels of service discouraging travellers from choosing the SH1/SH29 corridor as their preferred route.

In its current form, and with predicted increases in traffic volumes, this stretch of SH1 will not meet the safety and efficiency standards required for a highly strategic and important road corridor. In turn, this will adversely affect the customer experience (level of service) of using the road corridor, and undermine the significant investment made to date in completing the Waikato Expressway.



Business Case Model & Timing

Long-term business case approach

The NZ Transport Agency is using a business case approach to:

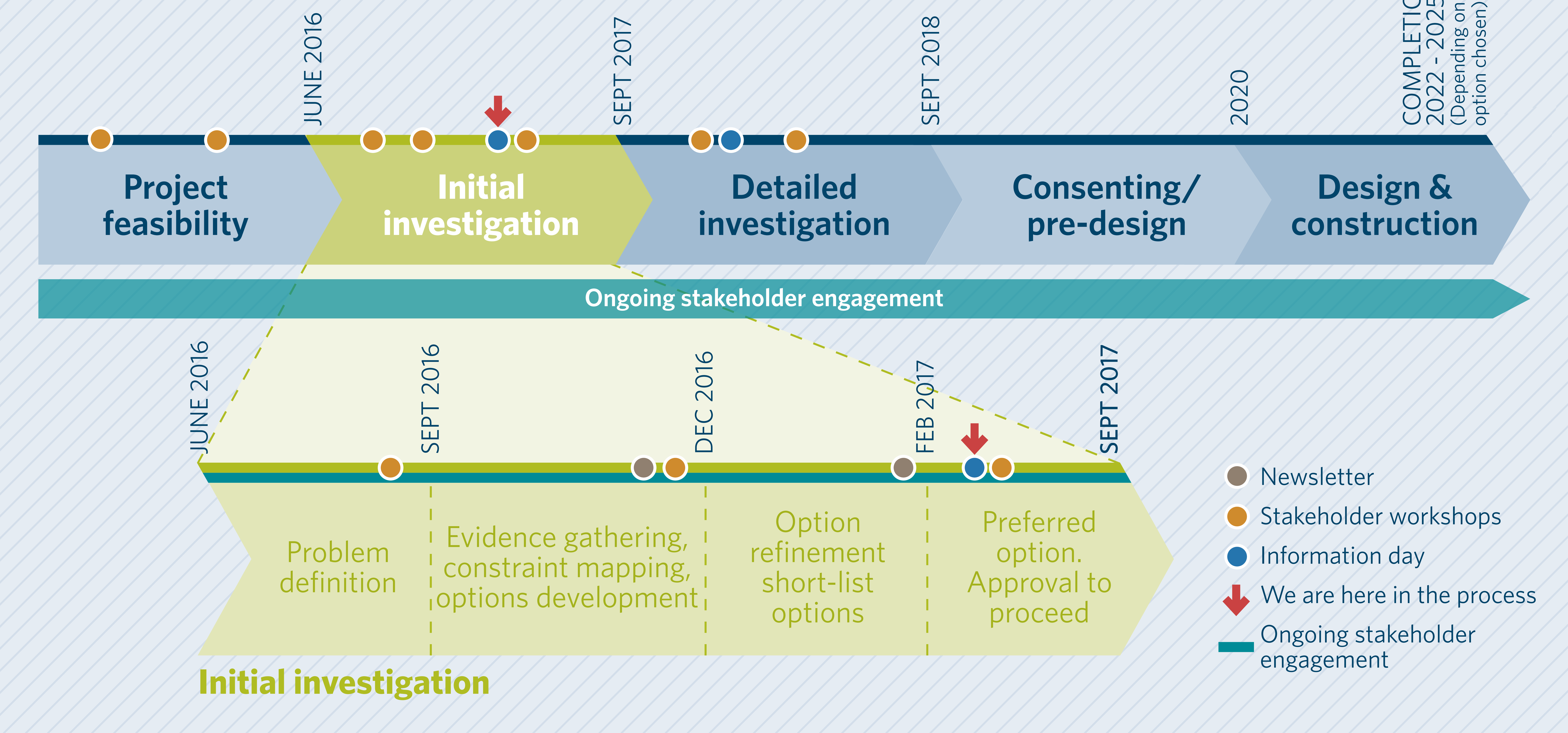
- Identify and agree the underlying problems that need to be addressed;
- Determine the benefits in investing in this corridor;
- Develop potential alternative solutions that address the problems and are cost effective.

A key component of this approach is the involvement of communities and stakeholders throughout the process. Firstly, in helping to define what the issues are and secondly how best they can be resolved.

This requires us to start with a blank canvas and consider a number of alternative solutions before arriving at a preferred solution.

We are undertaking a comprehensive engagement process with the community and stakeholders so we can identify what is important to you, both in terms of the environment this road travels through and how you use it.

Timeline

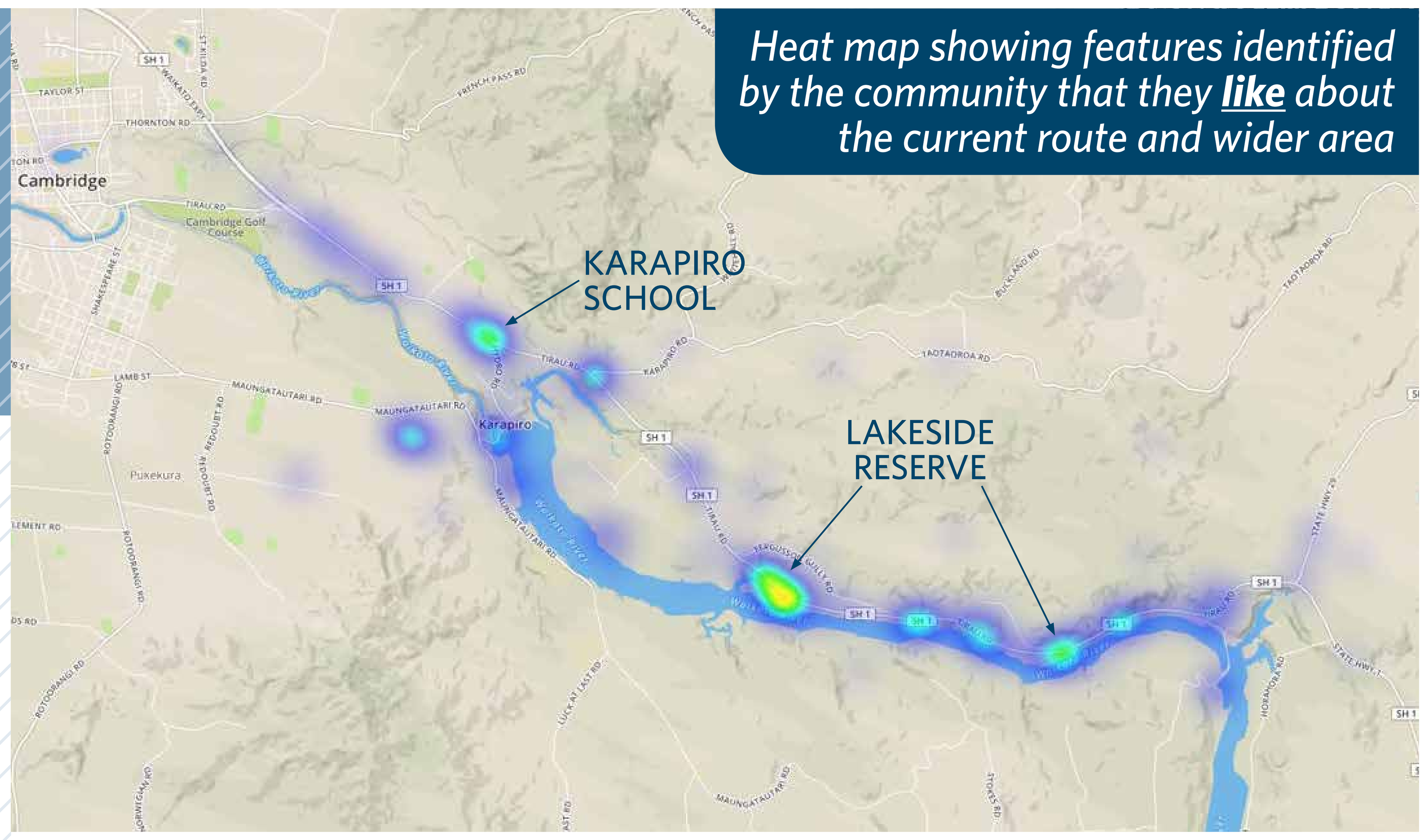


Online Surveys

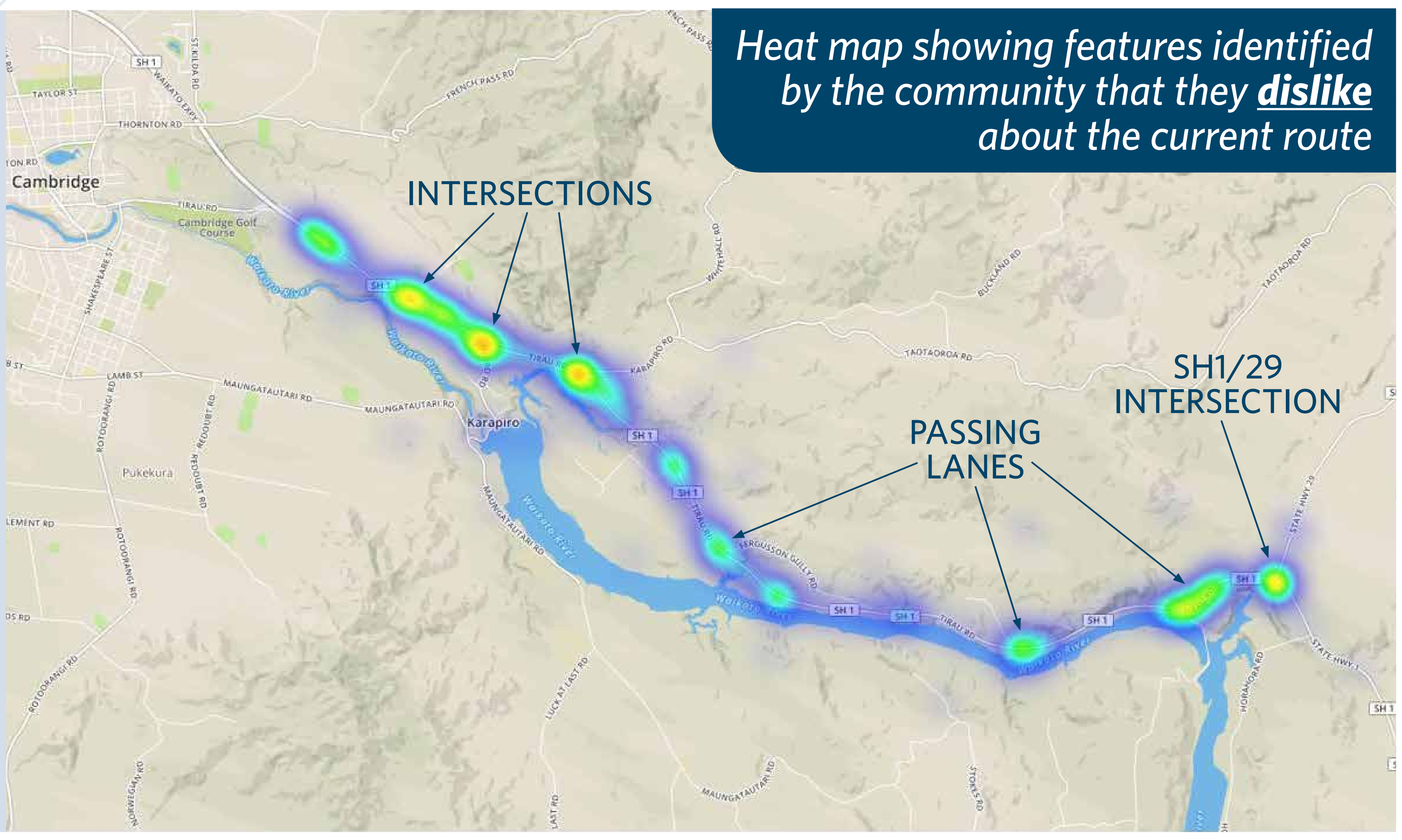
Online survey 1 (Nov 2016 - Jan 2017)

Identifying issues, opportunities & important features

489	**Number of respondents**
1,428	**Mapped responses (places & routes)**



*Heat map showing features identified by the community that they **like** about the current route and wider area*



*Heat map showing features identified by the community that they **dislike** about the current route*

The top three things, respondents would like to see improved in the area include:

- Safety at intersections;
- Traffic congestion and flow; and
- Safety along the road corridor.

The first survey enabled us to understand how the community uses this stretch of SH1, and what is important to them in terms of the wider area.

Online survey 2 (Feb - March 2017)

Five short-list options

Survey 2 is currently in progress. Through the project website: ***www.nzta.govt.nz/c2p*** you can access the online survey to provide feedback on the short-list of five options.

Your views will assist us to evaluate the options in terms of arriving at a preferred option(s) for further consideration. We would really appreciate your feedback.

Approach to Route Selection: The ACRE Model

The ACRE model is an acronym for each stage in the decision making process, standing for:

Area
Corridor
Route
Easement

STAGE 1: **AREA**

Identify study area and undertake an assessment and evaluation process to identify areas of least constraint for further study.

STAGE 2: **CORRIDOR**

Identify possible corridors within the selected area, gather more detailed information and undertake an assessment and evaluation process. Compare corridor options and select preferred corridor for further investigation.

We are currently at this point in the process.

STAGE 3: **ROUTE**

Identify possible routes within the corridor and collect detailed information on each route. Engage with key stakeholders and affected parties, compare options through rigorous assessment and evaluation criteria and select a preferred route.

STAGE 4: **EASEMENT**

Discuss route centreline and land requirements with affected parties, collect site specific information, identify locations for key structures and confirm the projects potential effects.

The ACRE approach enables the community to be involved with the NZ Transport Agency as it prepares planning applications required in accordance with the Resource Management Act.

The NZ Transport Agency has adopted the ACRE approach to identifying a suitable route for SH1 between Cambridge and Piarere (including the SH1/SH29 intersection). This approach ensures that a staged process of route selection is undertaken, starting at a high level and showing a logical progression down to a specific route. That corridor or route can be an online, or offline solution.

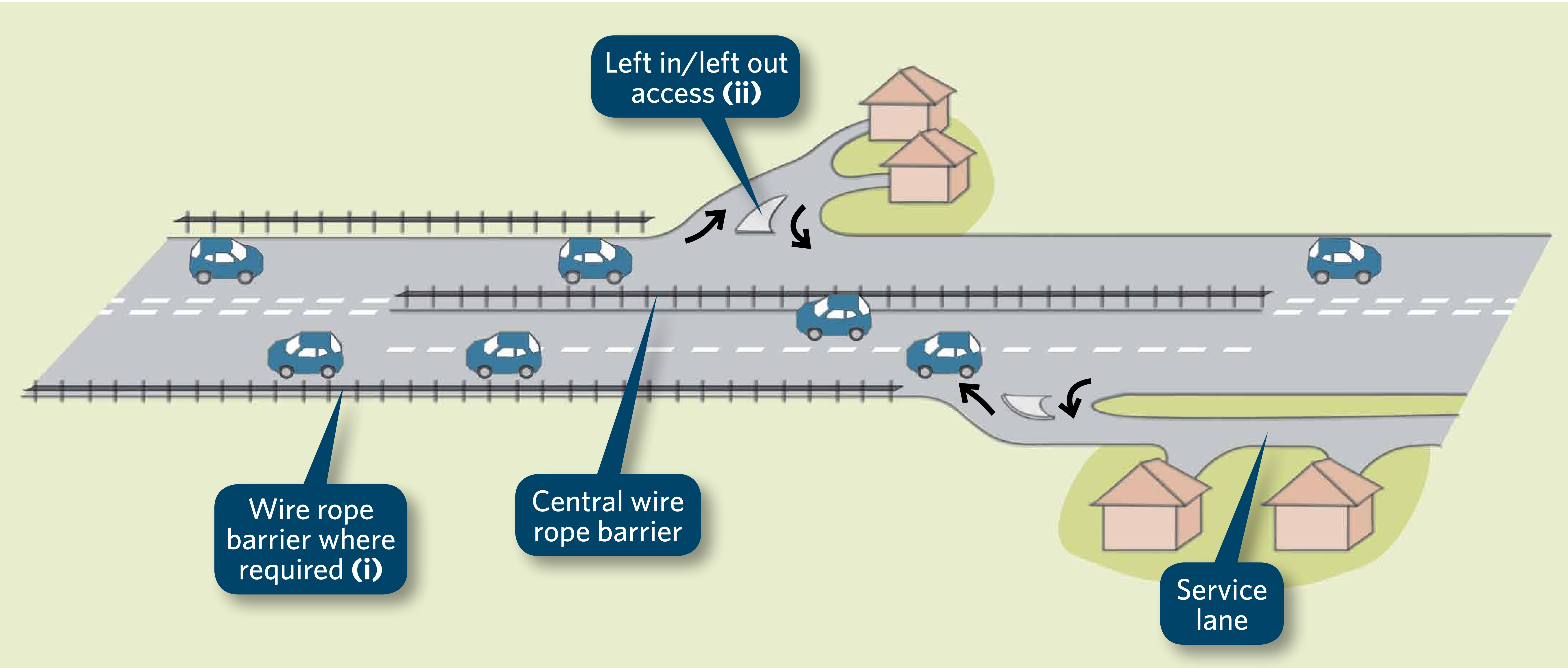
Improvements - safety only

- Central and side of road barriers located in high risk locations. **(i)**
- Minimise conflict with existing private and public accesses on to SH1 by rationalising and reducing overall number of accesses where practicable, and in some cases restricting such accesses to left-in/left-out vehicle manoeuvres. **(ii)**
- Provision of larger intersections where necessary.

Land requirements	Minimal
Safety i.e. reducing crashes	OK
Improving travel time	Poor
Improving access	OK
Improving network resilience*	OK
Complexity**	Comparatively low
Indicative cost	$50-100 million
Alignment with top 3 community expectations from 1st online survey 1. Traffic flow/congestion 2. Safety at intersections 3. Safety along road corridor	 Poor OK OK

** Reducing unplanned road closures caused by crashes, slips and general maintenance*

*** Covers the difficulty in attainment of consents, construction, operations and maintenance*



B OPTION Online

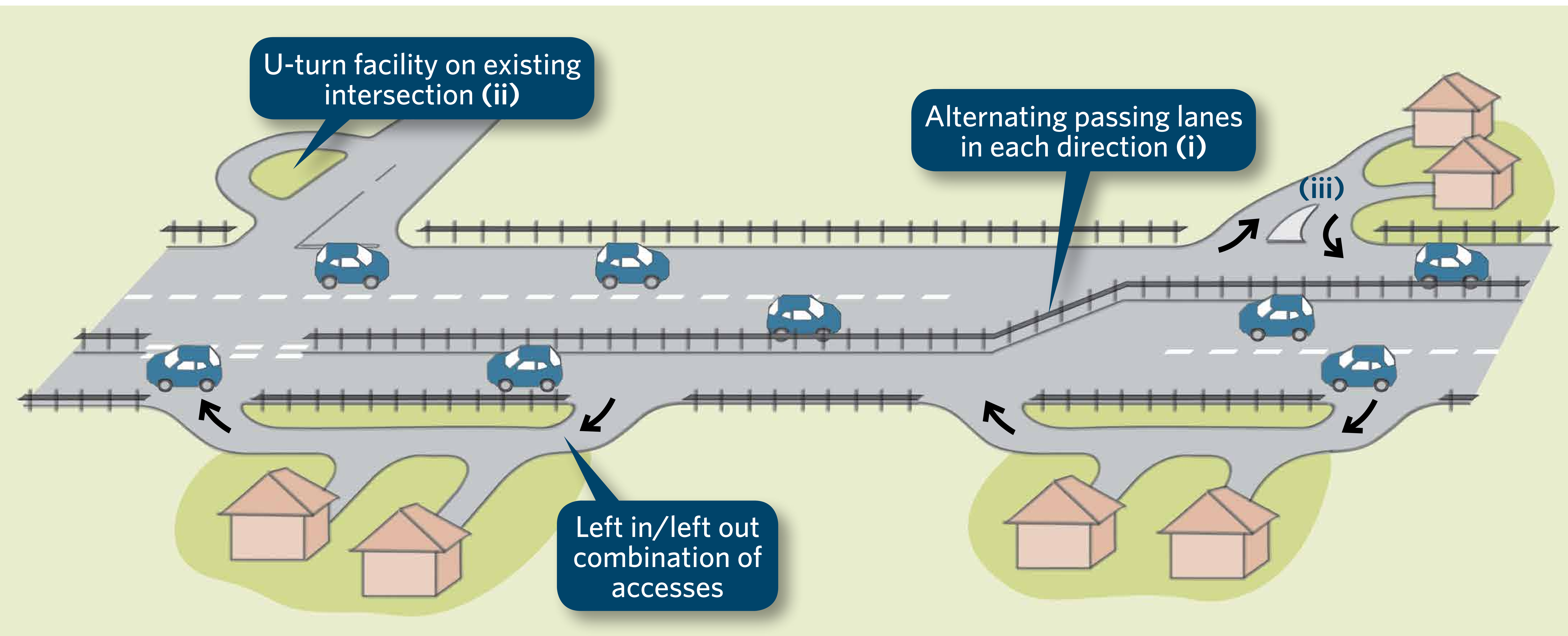
Improvements - safety, passing lanes & turnarounds

- 3 lanes for the entire length of road between the Cambridge Section and SH1/29 intersection.
- Access to middle lane (passing lane) will alternate along the length of the route. **(i)**
- Central and side of road barriers along entire corridor with breaks at yet to be determined intersections. Turnaround facilities to be provided at such intersections. **(ii)**
- Minimise conflict with existing private and public accesses on to SH1 by rationalising and reducing overall number of accesses where practicable, and in some cases restricting such accesses to left-in/left-out vehicle manoeuvres. **(iii)**

Land requirements	Minor
Safety i.e. reducing crashes	Very good
Improving travel time	OK
Improving access	OK
Improving network resilience*	Very good
Complexity**	Medium Complexity
Indicative cost	$50-100 million
Alignment with top 3 community expectations from 1st online survey 1. Traffic flow/congestion 2. Safety at intersections 3. Safety along road corridor	 OK Very good Very good

* *Reducing unplanned road closures caused by crashes, slips and general maintenance*

** *Covers the difficulty in attainment of consents, construction, operations and maintenance*



NOTE: This plan differs from that shown in Newsletter No.2 only to better differentiate between this option and option C.

Improvements - safety, passing lanes & parallel local roads

- 3 lanes for the entire length of road between the Cambridge Section and SH1/29 intersection.
- Access to middle lane (passing lane) will alternate along the length of the route. **(i)**
- Central and side of road barriers along entire corridor with breaks at yet to be determined intersections. Turnaround facilities to be provided at such intersections. **(ii)**
- Parallel local roads so no direct access for properties onto SH1 except at discrete positions. **(iii)**

Land requirements	Considerable but restricted to areas next to existing road corridor
Safety i.e. reducing crashes	Very good
Improving travel time	Very good
Improving access	Very good
Improving network resilience*	Very good
Complexity**	Highly complex in terms of construction and being disruptive to both SH1 users and residents, physical limitations in some places due to both Lake Karapiro and bluffs
Indicative cost	$100-300 million
Alignment with top 3 community expectations from 1st online survey 1. Traffic flow/congestion 2. Safety at intersections 3. Safety along road corridor	 Very good Very good Very good

** Reducing unplanned road closures caused by crashes, slips and general maintenance*

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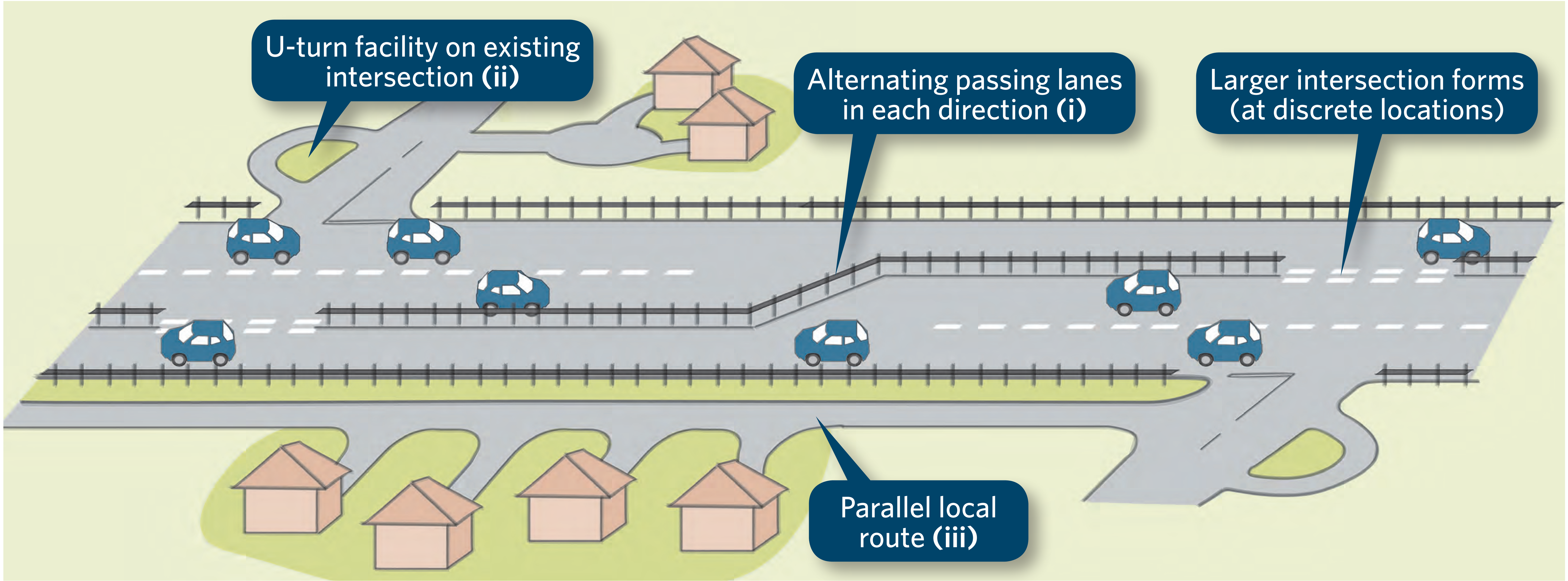

Four-lane expressway on existing highway alignment

- 4 lanes entire length – road width and cross section consistent with an Expressway standard road – similar to the Cambridge Section (i.e. adequate shoulders and lane widths, median barrier separation from on-coming traffic; and full corridor roadside barriers). **(i)**
- Parallel local roads so no direct access for properties onto SH1. **(ii)**
- Interchange style intersections (e.g. Waikato Expressway/Victoria Rd intersection) at 2 – 3 (yet to be confirmed) key locations along the route. **(iii)**

Land requirements	Significant but restricted to areas next to existing road corridor
Safety i.e. reducing crashes	Excellent
Improving travel time	Excellent
Improving access	Excellent
Improving network resilience*	Excellent
Complexity**	Highly complex in terms of disturbing known archaeological sites, physical limitations in some places due to both Lake Karapiro and bluffs, construction and being disruptive to both SH1 users and residents
Indicative cost	$300-500 million
Alignment with top 3 community expectations from 1st online survey 1. Traffic flow/congestion 2. Safety at intersections 3. Safety along road corridor	 Excellent Excellent Excellent

** Reducing unplanned road closures caused by crashes, slips and general maintenance*

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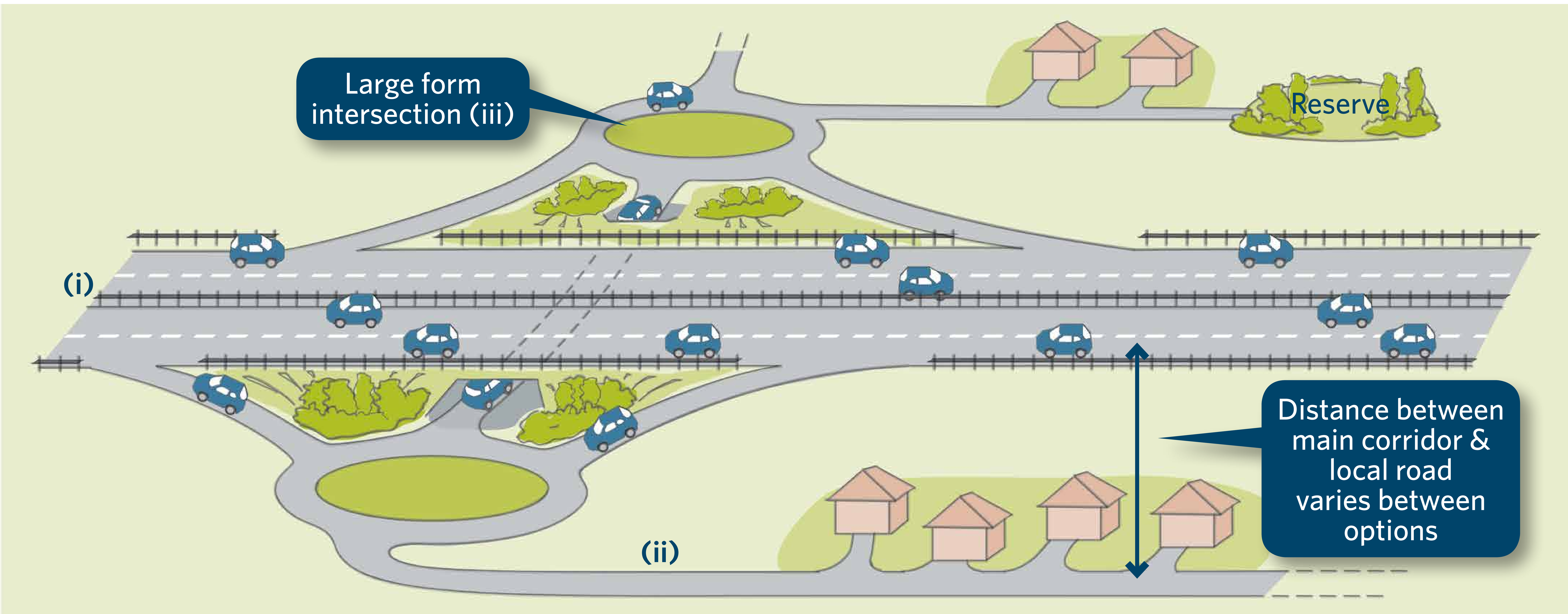


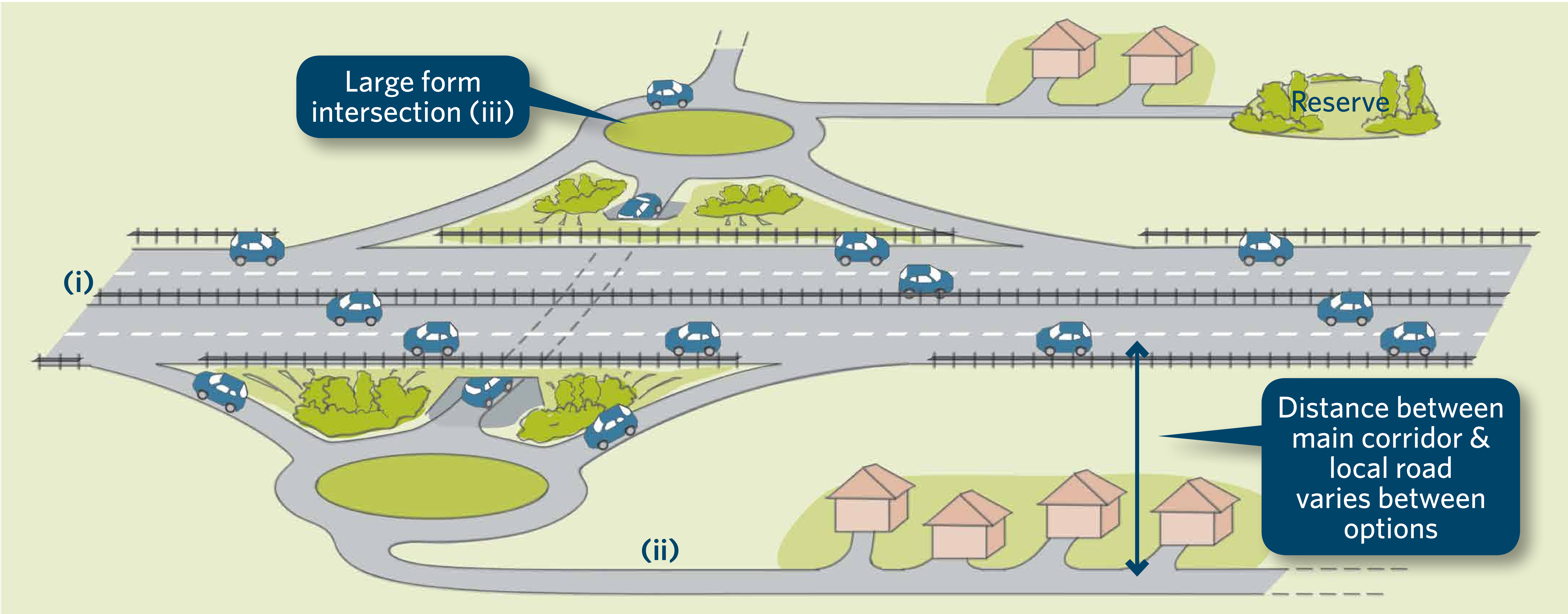
Four-lane expressway on new alignment (E1 & E2)

- Complete offline route from the end of the Cambridge Section through to a point within 5 km of existing SH29 intersection.
- 4 lanes entire length – road width and cross section consistent with an Expressway standard road – similar to the Cambridge Section. **(i)**
- No direct access to the Expressway for properties located adjacent to it. Alternative routes would need to be provided. **(ii)**
- Interchange style intersections (e.g. Waikato Expressway/Victoria Rd intersection) at 2 – 3 (yet to be confirmed) key locations along the route. **(iii)**

Land requirements	Significant - away from the existing road corridor, although potentially affecting fewer individual landowners than an online solution
Safety i.e. reducing crashes	Excellent
Improving travel time	Excellent
Improving access	Excellent - The majority of accesses on SH1 east of Karapiro Road would be largely unaffected. Opportunity to use the existing SH1 corridor to improve local access to properties and community features. Reduction in road traffic effects to large number of properties adjoining SH1. Minimal disruption during construction for users and residents of SH1 compared to an online solution.
Improving network resilience*	Excellent
Complexity**	Highly complex in terms of discovering unknown technical and environmental constraints. New and increased road traffic effects for adjoining landowners and potential severance of large rural properties.
Indicative cost	$300-500 million
Alignment with top 3 community expectations from 1st online survey 1. Traffic flow/congestion 2. Safety at intersections 3. Safety along road corridor	 Excellent Excellent Excellent

** Reducing unplanned road closures caused by crashes, slips and general maintenance*

*** Covers the difficulty in attainment of consents, construction, operations and maintenance*



Opportunities

Regardless of what long-term improvement option is selected and taken through to construction, the NZ Transport Agency (in conjunction with other potential investors) will consider a number of other opportunities that either directly or indirectly relate to this project. These opportunities will be considered as part of the detailed business case and may include (but are not limited to):

- The provision of a service centre;
- An off-road cycleway;
- The improved accessibility to and/or enhancement of community facilities;
- Review of local land use potential;
- Speed management options; and
- Any other opportunities that may be identified by stakeholders and/or the community.

The NZ Transport Agency will consider these opportunities in consultation with interested stakeholders (e.g. Waipa District Council).

The key here is to identify what opportunities exist and engage with relevant stakeholders to ensure we can deliver the best outcome for both the community and the road user.

NZ TRANSPORT AGENCY
WAKA KOTAHI

Cambridge to Piarere

New Zealand Government

Cambridge to Piarere

OFFLINE OPTIONS E1 & E2 (ALONG A NEW ROUTE)

There are worse things to hit than a barrier.

75%

of crashes where people die or are seriously injured are from drivers having head-on collisions or running off the road.

75 per cent of people who die or are seriously injured on our roads have had a head-on collision or driven off the road. Barriers stop your vehicle before you hit something less forgiving – like a tree, power pole or oncoming vehicle.

Wider centrelines

Simple things can save lives.

More space between lanes can reduce crashes by up to

20%

Widening the centreline is a deceptively simple way to steer drivers away from each other. This has been proven to reduce serious crashes by up to 20 per cent.*

* High Risk Rural Roads Guide, published September 2011, NZ Transport Agency. First Edition.

NZ TRANSPORT AGENCY
WAKA KOTAHI

Safe Roads / **Cambridge to Piarere**

New Zealand Government

What's next...

APRIL - MAY 2017
Landowner meetings

MAY 2017
Stage 1: minor works commence (visibility improvements at selected intersections)

SEPTEMBER 2017
Stage 2: main works begin (road widening for centreline and side barrier)

APRIL 2018
Anticipated completion date

Making your road safer.

Five people have died and 14 people have been seriously injured in head-on or run-off-road crashes on this section of SH1 from 2011 to 2015. At the same time, the number of vehicles using this section of SH1 is increasing.

Long term improvements will take time to get underway so we're planning improvements to make this stretch of road safer for everyone in the meantime.