



# Transit New Zealand's 10-year State Highway Plan and Forecast for 2006/07 to 2015/16

Incorporating Transit's 2006/07 Land Transport Programme





**TRANSIT NEW ZEALAND'S 10-YEAR STATE HIGHWAY  
PLAN AND FORECAST FOR 2006/07 TO 2015/16**  
Incorporating Transit's 2006/07 Land Transport Programme

Transit New Zealand

Wellington, New Zealand

June 2006

ISSN 1176-3140



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# TRANSIT NEW ZEALAND'S 10-YEAR STATE HIGHWAY PLAN AND FORECAST FOR 2006/07 TO 2015/16

## Foreword

Development of New Zealand's state highway network is accelerating at a rate never seen before. Investment in state highways is set to rise to \$6.6 billion over the next five years.

This comes on top of the significant increase in funding over the last 4 years, since the release of this Government's first transport packages, enabling us to address some of the pressures which have built up from previous under investment.

The funding announced in the 2006 Budget included a further \$425M in the first five years, to accelerate state highway improvements beyond August 2005 levels. This funding will be used to accelerate some high priority projects such as the Manukau Harbour Crossing on Auckland's Western Ring Route and to bring forward new projects such as investigation and preliminary design work for the Transmission Gully Motorway in Wellington.

The increased level of funding marks a significant step forward for state highway activities. We can now tackle a number of very large, complex and high value projects like the Ngaruawahia Bypass and the Christchurch Southern Motorway.

Greater confidence around future funding creates an expectation that Transit and its partners must deliver on. Current funding levels further increase the challenge to complete projects on time and ensure value for money is achieved and this will undoubtedly require careful planning.

Transit aims to build and operate a transport infrastructure that contributes to economic development and growth, and meets the needs of road users and communities. The multi-billion dollar programme of work will require a very real commitment from all our industry partners and local government, as well as Transit.

These are exciting times and Transit looks forward to the challenge.

Sir Tipene O'Regan  
*Acting Chairperson*



## INTRODUCTION

### I. Record levels of investment

Transit's 2006/07 10-year State Highway Forecast keeps up the momentum for state highway activities that was announced in August 2005 and further accelerates the development and construction of a number of key projects.

The result will speed up major works to ease traffic congestion, improve safety and make journey times more reliable around the country. Most importantly, it continues to give priority to the maintenance and operation of the existing network. Key features of this Forecast are:

- › A record level of work underway across the country, but particularly in Auckland and Wellington
- › Significant progress planned for Auckland's Western Ring Route, subject to support from Aucklanders for tolling
- › Positive contributions to managing travel demand (including bus priority lanes, cycling networks and ramp signalling)
- › A wide spread of safety initiatives and projects across the country (such as SH1 Centennial Highway Wire Rope Median Barrier, SH1 East-West Street Intersection in Ashburton and SH2 Tahaenui Bridge Realignment in Hawke's Bay)
- › Development of the SH1 Waikato Expressway as the primary route between Auckland, Hamilton and places south and to Tauranga and places east
- › Working with councils and developers to jointly fund sustainable transport infrastructure and services for high growth areas, such as the Western Bay of Plenty.

This Forecast regains the momentum announced in August 2005 but is different in two ways. First, it reflects updated priorities which are the result of the consultation process undertaken across New Zealand earlier this year, and our updated assessments of major projects. Some projects that were due to start in 2005/06 will now not start until 2006/07, because the programme was adjusted over the summer months to reflect lower than previously expected levels of funding in the latter part of the financial year. Second, the extra \$425 million approved in the Government's 2006 Budget for the next five years now means that we can accelerate some projects beyond 2005 targets. Provision has also been made for further

development of projects identified in strategic studies in key growth locations such as, north of Auckland, south of Hamilton and Queenstown.

Transit's 2006/07 10-year Forecast assumes that funding will continue at a similar level for the second five years.

Following ongoing discussions with regional land transport committees, Transit has, where possible, incorporated projects in its Forecast from the Waikato, Bay of Plenty and Wellington funding packages. This work will be further refined as detailed planning is completed. What this is likely to mean is:

- › In the Waikato, the \$215M package will speed up safety initiatives and development of the long-haul inter-regional Waikato Expressway route
- › In the Bay of Plenty, the \$150M package will help to speed up provision of new roads such as the Tauranga Eastern motorway, to support this high growth area
- › In Wellington, the funding packages will be used to support implementation of the new Regional Land Transport Strategy (subject to final consultation on the draft).

This record level of investment in the future builds on a highly productive year for Transit in 2005/06. While the primary focus of our Forecast is forward looking, it is opportune to look at our recent major project highlights.

Projects completed over the past year include:

- › SH1 Katetoke / Oakleigh Safety Improvement (Northland)
- › SH1 Nelson St Off Ramp (Auckland Central Motorway Junction)
- › SH5 Tapapa Realignment (Waikato)
- › SH29 Hewletts Rd Flyover (Tauranga)
- › SH2 Domain Rd Intersection (Tauranga)
- › SH1 Plimmerton to Mana (Wellington)
- › SH2 Kaitoke to Te Marua (Wellington)
- › SH1 Main Rd 4-Laning (Christchurch).

Projects where construction has started over the past year are included in the regional tables and are shown as committed.

## 2. Greater confidence in funding over five years

This year's Forecast sees the implementation of a very significant change in the way state highway construction is planned and funded. Funding for state highway construction, design and investigation activities included in this forecast is now guaranteed for five years and has been approved by Government in the Budget. In the past funding has only been allocated on a year-by-year basis with no guarantee for future years. Transit is working with other agencies to finalise and implement the changes as soon as possible.

The annual consultation process will remain but will focus only on the programme for the immediate financial year and the 10-year financial forecast. This change in funding arrangements is welcomed by Transit and supported by key stakeholders, including the construction industry. It will give Transit a higher level of confidence for the delivery of state highway projects; a development keenly sought by communities across New Zealand.

Even with much improved funding confidence, issues around designations, resource consents, material shortages and community agreement on projects, will continue to affect what can actually be delivered and when. It will be a top priority for Transit to resolve these issues promptly, with help from our transport partners, especially local government and communities.

## 3. Programme/Plan/Forecast

To show the potential impacts to our programming we have adopted three distinct time periods:

Year 1 – The first year, in this case 2006/07, is our land transport programme (State Highway Plan) under the Land Transport Management Act 2003 (LTMA). Table 2 outlines the 2006/07 programme with appendix 1 detailing the contribution made by specific activities to assisting economic development, assisting safety and personal security, improving access and mobility, protecting and promoting public health and ensuring environmental sustainability.

Years 1 to 5 – Transit's forward 5-year Plan is a robust prospective of the projects that are planned to be undertaken within this period.

The most important factor is that the Government has agreed to guarantee the 5-year Plan, with appropriate checks and balances, to ensure continued value for money, so that funding issues should not create constraints. For projects that are relatively early in the development process, progress depends on continued positive support from the communities the projects will be serving.

Years 6 to 10 – referred to as Transit's State Highway Forecast. This is Transit's long-term forecast and indicates the priority and possible inclusion of activities in that period. The projects set out for years 6-10 are indicative only. They are likely priorities based on current information. The State Highway Forecast does not commit to any particular timing within the second five year period since scheduling is dependent on knowledge gained on those activities from earlier phases of investigation and design.

The further out we forecast, the greater our plans and their timing are affected by factors such as:

- › The results of consultation on projects
- › Ongoing development of the best value solution
- › Obtaining the necessary consents, and
- › Purchasing property.

As required under the LTMA, table 1 shows Transit's 10-year financial forecast.

## 4. Value for Money

Transit prides itself on the value we create through stewardship and innovation across the full breadth of highway activities we manage. Recognising the large increase in both scale and complexity of what we do, we have launched a major project to review all aspects of our business to ensure best practices are applied at all levels in our supply chain.

We expect to complete this review by October 2006. Together with implementing recommendations adopted by Government from the Ministerial Advisory Group on Roothing Costs, we expect to ensure that costs are kept as low as possible, while still supporting the objectives set for us in the LTMA.



## 5. Traffic Congestion

Addressing traffic congestion is a key objective for Transit. There are a series of initiatives around the country to improve traffic flows. Some of these initiatives involve construction of new state highway links (such as the Western Ring Route in Auckland) while others aim to influence demand on the most heavily used parts of the highway network.

Travel Demand Management (TDM) is a combination of approaches that seek to influence demand for transport or travel. These include land use planning, network management, travel behaviour change and pricing initiatives. To contribute, Transit actively promotes an integrated approach to planning (see section 7 below), supports public transport via busways and priority lanes, co-ordinates traffic management (especially in Auckland through the Traffic Management Unit), improves how our existing state highways operate (eg through ramp signalling), improves traveller information systems and promotes tolling as a means to balance use of the network and sustain the benefits of new state highway links.

## 6. Western Ring Route and Tolling

The Western Ring Route (WRR) is a proposed strategic motorway running south – north through Auckland on State Highways 20, 16 and 18, connecting Manukau City, Auckland City, Waitekere City and North Shore City. It will take traffic from Manukau through Waterview and Hobsonville to Albany to provide a strategic alternative to State Highway 1. Ten individual projects are needed to complete the route, ranging from extra lanes and improved harbour crossings to completely new lengths of state highway. It needs to be completed as a package for the benefits to be realised by road users. Provision for completion of the WRR has been included in Transit's State Highway Forecast projections, as it was in August 2005. In order to achieve our target of completion by 2015, toll revenue from the route must repay the borrowing which is needed to supplement traditional funding sources. Transit is working on the understanding that Auckland does want the WRR and wants it completed sooner (around 2015) than would be possible under current conventional funding.

The recent extra funding announced in the Government's Budget does not alter Transit's plans to toll the WRR. It does enable completion of the Manukau Harbour

Crossing to be achieved a year earlier, but the previous completion target of 2012 was contingent on tolling. In short, Transit's plan for early completion of the Western Ring Route in Auckland remains dependent on support from Aucklanders for tolling the route. This is unchanged from August 2005.

The type and scale of projects making up the WRR and the desire to complete it sooner make it a very challenging and complex proposal. The benefits are significant: more reliable travel times, reduced commute times, improved airport connectivity and better overall network performance. The options available to Transit to achieve these benefits as soon as possible are limited. It is important that Transit undertakes public consultation before submitting a toll proposal to the Minister of Transport for approval. Meaningful public feedback will be central to ensure the Transit New Zealand Board is well informed.

Transit's proposal to toll the WRR will be made under current law (the Land Transport Management Act), which allows tolling on new roads where there is a free alternative route, and is subject to the Government's approval in each case. Consultation undertaken in March 2006 on road pricing (on the Ministry of Transport's Auckland Road Pricing Evaluation Study) is a separate issue. Although tolling and road pricing are related they do serve different purposes. Road pricing options involve charging for road use or parking within an area, or on a network of existing routes. If road pricing progresses, the Government will need to pass new legislation.

## 7. Transit's role in Transport Planning

To achieve a sustainable land transport system, we need to consider both land use and transport trends, and travel behaviour. Some areas of the country are experiencing higher than average economic growth, resulting in increased traffic demands on the state highway network that cannot be met even with our accelerated road building programme.

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways. Transit will work closely with regional and district councils to ensure that any substantial upgrading of the state highway network in the next 10 to 20 years is properly considered and planned, in

order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

## 8. Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway and its structures in the safest and least disruptive way, monitor locations where crashes occur and where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit uses various tools to do this, ranging from natural inventory databases (containing information on natural features that might impact on state highways), long term deterioration modelling, and annual condition data collection, supported by advanced contract delivery methods and rigorous performance reporting.

Maintenance and operations activities make up a substantial proportion (some 40 percent) of our 10-year Forecast. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, other maintenance and operations activities include:

- › A Traffic Management Unit in Auckland and Wellington
- › Traveller information systems such as the 0800 number for highway conditions, Transit's website, and radio broadcasts of travel information in Auckland every 15 minutes during morning and evening traffic peak period
- › Avalanche monitoring and management on the highway to Milford Sound
- › Managing highways affected by ice or snow during the winter
- › Coordination with New Zealand Police and Emergency Services in the management of incidents on the state highway such as crashes or chemical spillages
- › Working with Civil Defence to keep emergency response plans current.

## 9. Consultation on this Forecast

This year, Transit published its draft forecast for consultation on 22 February with a closing date for submissions of 24 March. The draft was a marked contrast to the previous year's forecast due to notification from Land Transport New Zealand of a slowing in the predictions of revenue growth into the National Land Transport Fund and increased costs for transport activities. As a result, in the February draft many projects had their construction starts deferred or taken out of the 10-year Forecast altogether.

Transit received some 662 written submissions from across the country, and held hearings at 16 locations, from Whangarei to Invercargill, at which some 185 submitters were heard by a panel comprised of the Transit Regional Manager and a member of Transit's General Management Team.

The issues highlighted by the submissions and hearings were carefully considered by the Transit Board. This resulted in a number of changes to the final State Highway Forecast, including project priorities.

Consistent with Land Transport New Zealand's allocation process, Transit's approach has been to fund maintenance (including emergency works) as a first priority. Improvement projects are ranked in national priority order and those with the highest priority are funded from nationally distributed funds (\$N). Projects that fail to attract national funding can be funded via regionally distributed funds (\$R). In general, these projects would not normally go ahead as they are lower down the national priority list. \$R are balanced over the next nine years to be spent as they accrue. \$R funded projects are identified in the regional tables by ®.

Transit's approach to \$R, was to take special note of regional priorities and seek best alignment. Nevertheless, Transit's national perspective means that not all local priorities and aspirations can be met. Transit is committed to continued dialogue with regions to work through these differences towards an workable solution.

## Table I – 10-year Financial Forecast covering expenditure and funding

### Maintenance and Improvements

(All values incorporate escalation at 3%)

	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	Total
	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)
<b>Maintenance</b>											
Structural	209	224	236	256	272	290	308	327	345	363	2830
Corridor	83	87	91	93	97	101	107	114	122	131	1026
Professional Services	55	56	58	60	62	63	65	67	69	71	626
Property Management	13	13	14	14	15	15	16	16	17	17	150
Preventive Maintenance	5	5	5	5	5	6	6	6	6	7	56
Emergency Works	32	22	22	23	23	29	25	25	26	27	254
Sub-Total	397	407	426	451	474	504	527	555	591	621	4942
<b>Improvements</b>											
Minor Safety Projects	27	28	29	30	32	33	34	36	37	39	325
Committed Projects	428	239	183	72	8	0	0	0	0	0	930
New Projects**	209	428	512	652	800	1024	890	697	678	650	6539
Property Purchase	82	96	96	58	60	63	65	67	70	72	729
Walking and Cycling	3	3	3	3	3	3	4	4	4	4	34
Sub-Total	748	794	823	815	903	1123	993	804	789	765	8557
Administration	47	49	53	56	59	63	67	72	76	77	619
<b>Total Expenditure</b>	<b>1192</b>	<b>1250</b>	<b>1302</b>	<b>1322</b>	<b>1436</b>	<b>1690</b>	<b>1587</b>	<b>1431</b>	<b>1450</b>	<b>1458</b>	<b>14118</b>
Toll funded construction borrowing*	57	87	34	140	180	180	180	120	0	0	978
NLTP anticipated funding	1135	1163	1268	1182	1256	1510	1407	1311	1450	1458	13120
<b>Total Funding</b>	<b>1192</b>	<b>1250</b>	<b>1302</b>	<b>1322</b>	<b>1436</b>	<b>1690</b>	<b>1587</b>	<b>1431</b>	<b>1450</b>	<b>1458</b>	<b>14118</b>

#### Notes:

\* Includes ALPURT B2 and Auckland Western Ring Route

\*\* Includes projects for which there is also a third party contribution outside of NLTP funding and some provision for new high priority projects identified from strategic studies of high growth, economic development areas, including:

- North of Auckland
- Auckland south
- Hamilton south
- Western Bay of Plenty
- Taupo
- Wellington/Kapiti Coast
- Nelson/Tasman
- North Canterbury
- Queenstown

**Table 2 – State Highways Activities for 2006/07 (Land Transport Programme)**

		Activity Name	Priority (P)	Indicative Start Date Quarter (Q)		Indicative Cash Flow (\$,000)
<b>Maintenance</b>		Structural	P1	Q1		209,000
		Corridor	P1	Q1		83,000
		Professional Services	P1	Q1		55,000
		Property Maintenance	P1	Q1		13,000
		Preventive Maintenance	P1	Q1		5,000
		Emergency Works	P1	Q1		32,000
<b>Administration</b>			P2	Q1		47,000
<b>Commitments</b>		Large Projects	P3	Q1		427,000
		Small and Medium sized projects	P3	Q1		16,690
<b>Improvements</b>		Minor Safety Projects	P4	Q1		27,000
		New Projects (as listed below)	P5	Q1		89,650
<b>Region</b>	<b>SH</b>	<b>Activity Name</b>	<b>P5</b>		<b>Phase *</b>	<b>Indicative Cash Flow (\$,000)</b>
Auckland	16	Northwestern Motorway TDM (Ramp Signalling)		Q1	D	850
Auckland	16	Northwestern Motorway TDM (Ramp Signalling)		Q3	C	4,120
Auckland	1	Northern Motorway TDM (Ramp Signalling)		Q1	D	1,060
Auckland	1	Northern Motorway TDM (Ramp Signalling)		Q3	C	5,870
Auckland	1	Akl Harbour Bridge – Moveable Lane Barrier		Q1	C	100
National	Var	Toll Systems Project – Stage 1		Q4	C	1,140
Auckland	18	Hobsonville Deviation		Q3	C	2,060
Auckland	16	Te Atatu – Royal 6 Laning		Q2	I	2,370
Auckland	20	Waterview Connection		Q1	I	1,280
Auckland	20	Waterview Connection		Q4	D	3,190
Auckland	20	Manakau Harbour Crossing		Q1	I	780
Auckland	20	Manakau Harbour Crossing		Q3	D	4,500
Auckland	16	Punganui Stream Bridge Replacement		Q1	I	100
Auckland	16	Punganui Stream Bridge Replacement		Q3	D	60
West Coast	6	Arahura Bridge		Q2	D	1,290
Auckland	1	Vic Park Tunnel		Q2	I	1,320
Auckland	1	Vic Park Tunnel		Q4	D	6,090
Auckland	1	Newmarket Viaduct		Q1	I	2,060
Auckland	1	Newmarket Viaduct		Q4	D	1,140
Canterbury	Var	Christchurch TDM Implementation		Q4	C	400
Bay of Plenty	Var	Tauranga Central Corridor TDM		Q2	I	100
Wellington	2	Dowse to Petone		Q4	C	340
Waikato	1	Church to Avalon Drive 4 Laning		Q3	C	4,390
Wellington	1	Basin Reserve Improvements		Q2	I	310
Wellington		Transmission Gully		Q2	I	5,150
Wellington		Kapiti Western Link Road – Stage 1		Q2	D	510
Waikato	1	Avalon Drive Bypass		Q3	C	2,010
Waikato		Hamilton Southern Links		Q1	I	2,070

\* I = Investigation D = Design C = Construction

**Table 2 – State Highways Activities for 2006/07 (Land Transport Programme) continued**

Region	SH	Activity Name	Priority P5	Indicative Start Date Quarter (Q)	Phase *	Indicative Cash Flow (\$,000)
Bay of Plenty		Harbour Link		Q3	C	11,840
Canterbury	73	Christchurch Southern Motorway Extension		Q2	D	2,530
Auckland	1	Warkworth Stage 1		Q3	I	460
Auckland	2	Kopuku		Q2	I	450
Auckland	1	AHB Storm Water Upgrade		Q2	I	50
Auckland	1	AHB Storm Water Upgrade		Q4	C	1,120
Taranaki	3	Bell Block Bypass		Q4	C	5,320
Waikato	1	Ngaruawahia Bypass		Q3	D	1,040
Northland	1	Waitaki Landing to Cape Reinga Seal Ext. Stage 2		Q2	D	340
Bay of Plenty	2	Tauranga Eastern Motorway		Q3	D	2,240
Waikato	1	East Taupo Arterial		Q1	D	1,850
Waikato	1	Cambridge Bypass		Q1	D	2,000
Waikato	1	Rangiriri Bypass		Q1	I	620
Otago	1	Caversham 4 Laning		Q1	I	130
Hawke's Bay	50A	Hawke's Bay Expressway Southern Extension		Q2	I	230
Canterbury		Christchurch Northern Arterial Rural		Q2	I	140
Wellington	2	Rimutaka Corner Easing (Muldoon's)		Q2	D	70
Northland	1	Akerama Curves Realignment & PL		Q3	D	170
Northland	1	Kamo Bypass Stage 2		Q2	I	700
Otago	1	East Taieri Bypass		Q1	I	210
Hawke's Bay	2	Matahorua Gorge Realignment		Q1	I	410
Bay of Plenty	2	Omokoroa Roundabout		Q2	I	460
Nelson/Marlborough	60	Ruby Bay Bypass		Q1	D	240
Nelson/Marlborough	6	Whangamoia South Realign		Q2	I	2,060
Nelson/Marlborough	6	Hope Saddle Realign		Q4	I	310
<b>Improvements</b>		Small and Medium sized projects	P5	Q1		68,310
		Strategic Studies	P5	Q1		13,000
		Strategic Initiatives	P5	Q1		21,000
		Property Purchase	P5	Q1		82,000
		Walking & Cycling	P5	Q1		3,000

\* I = Investigation D = Design C = Construction

**Notes:**

- Indicative durations of large projects are shown in the regional tables
- The priority order is a requirement of the LTMA and is listed in relative terms

# GUIDE TO REGIONAL TABLES – EXAMPLE

## Auckland State Highway Plan and Forecast for 2006/07 to 2015/16

### Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

Green icons represent committed phases.

Construction of final project.

Identification of problem and potential solutions.

Engineering design of works to be undertaken, including cost estimation.

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$ \$ 5-20M \$ \$ \$ 20-100M \$ \$ \$ \$ 100+M			
	<b>Large Projects (Committed)</b>					
1	Central Motorway Junction Stage 2 @ @	Congestion Relief/TDM	23.42			
	<b>Large Projects (Priority Order)</b>					
16	Ti Atatu – Royal 6L	Congestion Relief/TDM	\$ \$ \$			
20	Manukau Harbour Crossing	Congestion Relief/TDM	\$ \$ \$ \$			
	<b>Small and Medium Projects (Priority Order)</b>					
1	Greenlane East Interchange	Congestion Relief/TDM	4.15			
1	Orewa Township Upgrade	Safety	\$			
	<b>Passing Lanes (Priority Order)</b>					
16	Old Railway Road East Bd PL	Safety	\$			
	<b>Stock Effluent Disposal Facility</b>					
1	Wellsford	Environmental	\$			
	<b>Walking &amp; Cycling</b>					
16	Westgate Pedestrian Facility	Access	\$			
	<b>Strategic Studies</b>					
	Northern Busway Extension to Orewa (committed)					
	SH1/16 Auckland to Wellsford					

Denotes funding sources as shown on the bottom of the page.

Appendix 1 lists large projects and their objectives to be achieved under the Act, as well as options and alternatives considered.

Value of remaining works to be funded from Land Transport NZ.

Estimated total cost of project (all phases).

Committed phase. Value of remaining works to be funded from Land Transport NZ.

Appendix 2 gives a generic list of how projects contribute to the purposes of the Act, as well as options and alternatives considered.

All projects other than large will be carried out within the first three years of the plan.

The phase is shown in the 06/07 year should continue into the plan years (where relevant) so the icon will remain dark. The icons shown after these phases, and those shown in the forecast years are shown grey. This is to represent indicative timings given that the outcomes of the earlier phases are not fully known.

Denotes in conjunction with third party contributions outside NLTP funding.

@ denotes regionally distributed funds

© denotes crown funding

\$ in conjunction with third party contributions outside NLTP funding

# COMMONLY USED ABBREVIATIONS WITHIN THE REGIONAL TEXT AND TABLES

<b>Project Names</b>		<b>Project Related Information</b>	
AHB	Auckland Harbour Bridge	CCTV	Close Circuit Television
ATTOMS	Auckland Transit Traffic Operation Management System	SH	State Highway
CMJ	Central Motorway Junction	Var	various
SWATT 2010	South Waikato and Taupo Target 2010	VMS	Variable Message Signs
UH Br	Upper Harbour Bridge	Nth	north
ALPURT	Albany to Puhoi realignment	NB or Nth Bd	northbound
		Sth	south
		SB or Sth Bd	southbound
		West Bd	westbound
		East Bd	eastbound
<b>Project Type</b>			
4L	Four laning		
6L	Six laning		
8L	Eight laning		
ATMS	Advanced Traffic Management Systems		
Aux	Auxiliary		
BPL	Bus Priority Lane		
EF	Stock Effluent Disposal Facility		
Ext	Extension		
Imp.	Improvement		
I/C	Interchange		
I/S or Int	Intersection		
Ped	Pedestrian		
PL	Passing Lane		
Realign	Realignment		
SE	Seal Extension		
SI	Safety Improvement		
SVB	Slow Vehicle Bay		
TDM	Travel Demand Management		
<b>Related Documents and Organisations</b>			
		LTMA	Land Transport Management Act 2003
		MOT	Ministry of Transport
		NZTS	New Zealand Transport Strategy
		NLTP	National Land Transport Programme
		RLTS	Regional Land Transport Strategy





## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Northland's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the Northland region include:

- › Road safety: of particular concern is the separation of or safe interaction between heavy freight traffic and general traffic (including tourist traffic), and crashes on bends
- › Secure, efficient and safe transport corridors, especially between Auckland and Whangarei
- › Forestry traffic: over the next few years forestry harvesting is expected to increase to 4 million tonnes per year with much of it expected to be exported through Marsden Point Port
- › Tourist traffic: particularly on the Twin Coast Highway network linking the Bay of Islands, Cape Reinga and the Waipoua Forest
- › Increased land development at Ruakaka, Marsden Point, west of Whangarei, Kerikeri, Waipapa and between Mangonui and Taipa, is resulting in growing traffic volumes, leading to the need for some improvements to the strategic roading network, including state highways
- › Increasing congestion through the Whangarei urban area, including the state highways
- › Lack of passing opportunities
- › Spillages from stock trucks
- › Low road standards (particularly on local roads) compared with the rest of the country.

## How we plan to address these key issues

The terrain in Northland is often difficult, causing state highways to be generally quite winding and undulating. Northland also has a diverse geology resulting in areas of unstable soft rock formation ("Onerahi Chaos"). This, together with an almost sub tropical climate of high rainfall, results in some lengths of state highway having an uneven, rough surface. Transit will continue to seek engineering solutions to permanently stabilise such areas.

Intensified land use, particularly around Kerikeri and west and south of Whangarei, and growing traffic volumes are placing increasing demands on state highways. As a result, there is a need to improve the alignment of highways and provide more passing lanes, especially on SH1 between the intersection with SH10 at Pakaraka and Ross Rd, north of Wellsford.

Improvements are also required on key forestry routes to accommodate the predicted increases in forestry traffic from Northland forests to Northport at Marsden Point. Proposed improvements include the provision of passing lanes, seal widening, and the upgrade of intersections where forestry trucks enter the state highway network. Innovative low-cost solutions to the latter will be required because logging trucks generally use intersections only for the relatively short harvesting period.

Large improvement projects (with construction costs of more than \$3.4M) have been indicated for 10 years while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Northland projects in the 10-year forecast are shown on the map.

## Road Safety – Secure and Efficient Transport Corridors

Transit will continue to improve the safety and efficiency of state highways and provide a network of stock effluent disposal facilities, in conjunction with local authorities. A number of large and small to medium activities have been proposed. These include realignments, intersection improvements, seal widening, removal of roadside hazards and guard rails.



## Tourist Routes

Stage 1 of the sealing of SH1 from Waitiki Landing to Cape Reinga was completed during 2004/05. Stage 2, which covers the remainder of this 20-kilometre section of state highway is included within the 10-year State Highway Forecast. Cape Reinga is a nationally significant tourist destination and sealing will meet tourist expectations and improve safety.

## Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. In addition to the many passing lanes already completed, Transit plans to progress further passing lanes on SH1 between Auckland and Kaitiāia and on SH14.

## Walking and Cycling

Two walking and cycling projects have been identified that will provide new or upgraded pedestrian or cyclist facilities.

## Strategic Studies

We are proposing to undertake a number of strategic studies for the Northland region, including SH1 and SH14 in Whangarei City, to improve our long-term planning and assist good decision-making.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

Maintenance activities make up a large proportion of the forecast expenditure in the Northland region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Resurface 66.5 km and reconstruct 12.8 km of highway
- › Continue a programme of slip site monitoring and management
- › Continue a programme of minor safety improvements including drainage improvements, intersection upgrades, seal widening, and guardrails, in addition to planned capital improvements to address safety issues.

# Northland State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)
			\$ < 5M    \$\$\$ 20-100M    \$\$\$\$ 100+M

**Large Projects (Priority Order)**





















I	Wairiki Landing to Cape Reinga Seal Ext Stage 2 ⑥	Route Efficiency	\$ \$
10	Bulls Gorge Realignment ⑥	Route Efficiency	\$
I	Akerama Curves Realignment & Sth Bd PL ⑥	Safety	\$ \$
I	Kamo Bypass Stage 2 ⑥	Route Efficiency	\$ \$
I	Snake Hill Realignment ⑥	Safety	\$ \$
12	Matakohe Realignment ⑥	Route Efficiency	\$ \$
I	Brynderwyn Hill Realignment ⑥	Route Efficiency	\$ \$

**Small and Medium Projects (Priority Order)**

I	One Tree Point Road Int Upgrade Stage 2	Safety	\$
I	Springfield Rd to Oakleigh Service Station SI	Safety	\$
10	Puketona SH 11 Intersection Safety Improvement	Safety	\$
10	Kaingaroa SI	Safety	\$
I	Loop Rd Nth to Smeatons Hill SI	Safety	\$
I	Mangakaremea Rd to Waipu Gorge Rd SI	Safety	\$
14	Millington Road to Kara Road SI	Safety	\$
12	Wairau River S-Bend Realignment ⑥	Safety	\$







⑥ denotes regionally distributed funds

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			
		  	
		   	
			 
		 	  

# Northland State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
	<b>Passing Lanes (Priority Order)</b>					
I	Kaiwaka Sth Bd PL	Safety	\$			
I	Brynderwyns North Down Hill Passing Bay	Safety	\$			
I	Hukerenui Nth Bd PL Extension	Safety	\$			
I	Waioiao Nth Bd PL	Safety	\$			
I	Old North Rd Sth Bd PL	Safety	\$			
I	Waioia North Nth Bd PL	Safety	\$			
I	Callaghan Rd Sth Bd PL	Safety	\$			
I	The Braigh Sth Bd PL	Safety	\$			
I	Callaghan Rd Nth Bd PL	Safety	\$			
I4	Newton Rd West Bd PL <sup>®</sup>	Safety	\$			
	<b>Stock Effluent Disposal Facility</b>					
	Whangarei District	Environmental	\$			
	<b>Walking &amp; Cycling</b>					
10	Kaero Pedestrian Facility	Access	\$			
12	Kaikohe Pedestrian Facility	Access	\$			
	<b>Strategic Studies</b>					
	SH1/14 Whangarei					

<sup>®</sup> denotes regionally distributed funds



## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with the Auckland Regional Transport Authority and regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Auckland's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

A sustainable land transport system cannot be achieved without considering land use patterns and transport trends and behaviour. To do this, Transit needs to be involved at an early stage in regional and local growth strategies (or emerging views where strategies have not been written) and planning documents, as these are critical to supporting regional land transport strategies.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the Auckland region include:

- › Severe congestion, including variability in trip times
- › Road safety, and in particular, a lack of passing opportunities on SH1 and SH16 north of Auckland
- › Traffic growth, driven by population growth
- › An alternative route to SH1 through Auckland
- › Secure efficient and safe transport corridors, especially between Auckland and Whangarei and SH2 within the Auckland region
- › The impact of land use development because of continuing intensification within the Metropolitan Urban Limit (MUL)
- › Increased land use development at growth nodes such as Warkworth and Kumeu leading to the need for improvements to the roading network.

## How we plan to address these key issues

Economic growth and resulting increases in traffic demand mean that the state highway network in Auckland will need to be extended, and existing lengths substantially upgraded within the next 10 to 20 years, to relieve congestion and support the Auckland Regional Growth Strategy.

Travel Demand Management (TDM) is a combination of activities that together seek to influence travel behaviour. TDM methods include travel plans, traveller information systems and traffic management techniques such as ramp signalling. Transit endorses the principle of TDM as an integral component of a sustainable approach to land transport and is actively investigating opportunities for TDM.

Improvement works encompass the entire region with particular focus on the Auckland Central Corridor, Western Ring Route (WRR) and the Northern Busway, including the Esmonde Road Interchange. Corridors outside the Auckland MUL also require improvements to accommodate increases in inter-regional travel. Proposed activities include improvements to the alignment of existing two-lane highways, seal widening and the provision of passing lanes.

Large improvement projects (with construction costs of more than \$3.4M) have been indicated for 10 years, while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Auckland projects in the 10-year State Highway Forecast are shown on the map.

## Travel Demand Management

Tenders have recently closed for a project to install ramp signalling throughout the Auckland motorway network. Installation of signals will commence on the Southern Motorway in September 2006, with the Northwestern and Northern Motorways following as an integrated project.

## Auckland Central Corridor

Auckland Central Corridor activities cover SH1 from Albany to Manukau. In addition to the Central Motorway Junction upgrading project, which is underway, several capacity improvement projects are forecast for the next 10 years. These include projects such as the Vic Park Tunnel and Newmarket Viaduct replacement, which add capacity to maximise the performance of the Central Motorway Junction project.

## Northern Busway and Esmonde Rd Interchange

In addition to other SH1 improvements in the Auckland Central Corridor, construction of the Northern Busway is well advanced. The project is a critical component of the Auckland Regional Land Transport Strategy to improve passenger transport services between North Shore and the Auckland isthmus. The initial stages are already in use and have proved to be a great success.

## Western Ring Route

The Western Ring Route (WRR) is a proposed strategic motorway running south – north through Auckland, connecting Manukau City, Auckland City, Waitekere City and North Shore City. It is made up of ten individual projects that need to be completed as a complete package. It will take traffic from Manukau through Waterview and Hobsonville to Albany to provide a strategic alternative to State Highway 1.

Provision for completion of the WRR has been included in Transit's State Highway Forecast projections, but in order to complete by 2015, as planned since August 2005, toll revenue will be needed from the route in order to fund the required debt. Transit is working on the understanding that Auckland does want the WRR and wants it completed sooner (around 2015) than would be possible under current conventional funding.

Increases in funding to state highway activity will not meet all the costs of state highway projects. Transit's plan for early completion of the Western Ring Route in Auckland remains dependent on support from Aucklanders for tolling the route. This is unchanged from August 2005.

The set of projects making up the WRR and the desire to complete it sooner make it a very challenging and complex proposal. The options available to Transit for achieving early completion so as to provide more reliable travel times, reduced commute times, improved airport connectivity and better overall network performance are limited and consultation is important before Transit makes any decisions. Meaningful public feedback will be central to ensure the Transit New Zealand Board is well informed.

An announcement will be made regarding Transit's intentions for completing the WRR and tolling in coming months. Although tolling and road pricing are related they do serve different purposes. Recent consultation on road pricing by the Ministry of Transport has added to our considerations on when and how Transit should proceed on tolling and its consultation.

The 2006/07 State Highway Forecast includes an \$800M loan to advance the Waterview Connection project and ensure the completion of the Western Ring Route by 2015 (subject to tolling). The tender for the construction of the motorway link between SH1 and Puhinui Interchange has been let. Construction of the Manukau Harbour Crossing has been brought forward as a result of additional funding, with the Mangere Bridge Duplication and motorway widening planned for completion mid 2011.

## Public Transport Improvements

All new projects being developed consider and make appropriate provision for public transport. In addition, a number of bus priority lanes are being progressed in conjunction with other motorway capacity improvements.

## Road Safety

Transit has identified a number of activities to improve the safety and efficiency of sections of state highways. These include realignments, intersection improvements, seal widening and lighting safety retrofits.

## Passing Opportunities

Limited passing opportunities on parts of the rural state highway network lead to driver frustration and accidents. Transit plans to progress passing lanes on both SH1 and SH16 north of Auckland, and on SH22 north of Pukekohe.

## Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities, two new facilities are being constructed on SH1, one at Wellsford and the other at the Bombay Hills.

## Walking and Cycling

Provision for walking and cycling activities is an integral part of state highway planning. While these facilities are provided as part of improvement projects where applicable, there is one specific pedestrian facility planned for implementation in the next three years, on SH16 at Westgate.

## Strategic Studies

We are proposing to undertake a number of strategic studies for the Auckland region to improve our long-term planning and assist good decision-making.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

Maintenance and operations activities make up a large proportion of the forecast expenditure in the Auckland region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, other maintenance and operations activities include:

- › Resurfacing 69km of multi-lane motorway
- › Resurfacing 17km and reconstructing 4.8km of rural state highway
- › Improving safety by applying high skid resistance surfacing at critical locations
- › Continuing to refine maintenance practices to reduce traffic disruptions and noise during the day and night
- › Continuing to carry out structural and seismic strengthening of bridges, including the Auckland Harbour Bridge
- › Improving techniques and response times to incidents on motorways.



























In 2006/07 the Transit managed Traffic Management Unit (TMU), a joint collaboration between Transit and six Auckland local authorities, providing 24/7 integrated traffic management, incident management and traveller information to road users, proposes to:

- › Continue to improve management of the wider impacts of the expanding motorway construction programme
- › Expand the geographic coverage and improve the functionality of the motorway Advanced Traffic Management Systems
- › Provide an improved traveller information service to users through the traffic website and associated services
- › Increase resource levels to operate travel demand management measures, such as ramp signalling
- › Continue to enhance the management of the critical arterial network by improving co-ordination of traffic signals throughout the region
- › Improve asset management systems for all high technology equipment.

## Auckland State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M) \$ < 5M    \$\$\$ 20-100M \$\$ 5-20M    \$\$\$\$ 100+M	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
<b>Large Projects (Committed)</b>						
I	Central Motorway Junction, Stage 2	Congestion Relief/TDM	23.42			
20	Mt Roskill Extension	Congestion Relief/TDM	140.16			
18	Hobsonville Deviation	Congestion Relief/TDM	3.6			
16	Newton Rd to Western Springs Aux Lane	Congestion Relief/TDM	3.79			
I	Northern Busway PT (Stages 1 & 2)	Congestion Relief/TDM	134.40			
20	Manukau Extension §	Congestion Relief/TDM	189.91			
I	Waiohuru Connection I/C §	Congestion Relief/TDM	7.86			
I	Esmonde Rd I/C	Congestion Relief/TDM	12.16			
18	Greenhithe Deviation	Congestion Relief/TDM	30.36			
Var	ATMS Stage IV – CMJ	Congestion Relief/TDM	19.4			
I	Southern Motorway TDM (Ramp Signalling)	Congestion Relief/TDM	25.0			
I	Northern Busway Esmonde Bus Priority Lane	Congestion Relief/TDM	0.75			
18	Upper Harbour Bridge Duplication	Congestion Relief/TDM	0.64			
I	ALPURT – Sector B2 Toll Road	Route Efficiency	55.90			
I	Newmarket Viaduct	Congestion Relief/TDM	1.13			
I	Newmarket Viaduct to Greenlane Aux	Congestion Relief/TDM	0.20			
20	Waterview Connection	Congestion Relief/TDM	0.18			
20	Manukau Harbour Crossing	Congestion Relief/TDM	0.94			







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

® denotes regionally distributed funds















































§ in conjunction with third party contributions outside NLTP funding

# Auckland State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
<b>Large Projects (Priority Order)</b>						
I 6	Northwestern Motorway TDM (Ramp Signalling)	Congestion Relief/TDM	\$\$			
I	Northern Motorway TDM (Ramp Signalling)	Congestion Relief/TDM	\$\$			
I	Auckland Harbour Bridge Moveable Lane Barrier	Safety	\$\$			
I	Northcote to Sunnyside Auxiliary Lane	Congestion Relief/TDM	\$\$			
I 8	Hobsonville Deviation §	Congestion Relief/TDM	\$\$\$\$			
I 6	Te Atatu – Royal 6L	Congestion Relief/TDM	\$\$\$			
I 6	Te Atatu I/C West Bd Off-ramp Upgrade	Congestion Relief/TDM	\$\$			
I 6	Waterview to Rosebank 8L	Congestion Relief/TDM	\$\$\$			
20	Waterview Connection	Congestion Relief/TDM	\$\$\$\$			
20	Manukau Harbour Crossing	Congestion Relief/TDM	\$\$\$\$			
I 6	Rosebank to Te Atatu 8L	Congestion Relief/TDM	\$\$\$			
	WRR Ramp Signalling	Congestion Relief/TDM	\$\$\$			
	ATMS Stage IV – Stage 2	Congestion Relief/TDM	\$\$\$			
I 6	Pungonui Stream Bridge Replacement	Route Efficiency	\$			
I	Vic Park Tunnel ©	Congestion Relief/TDM	\$\$\$\$			
I	Newmarket Viaduct ©	Congestion Relief/TDM	\$\$\$\$			
I	Newmarket Viaduct to Greenlane Aux ©	Congestion Relief/TDM	\$\$			

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\* refer to text on page 20



## Auckland State Highway Plan and Forecast for 2006/07 to 2015/16

### Legend: Nature of work

Committed Investigation	Committed Design	Committed Construction
Investigation	Design	Construction

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
<b>Large Projects (Priority Order)</b>						
16	Brigham Creek Extension <sup>Ⓞ</sup>	Route Efficiency	\$\$\$			
1	Warkworth Stage 1 <sup>Ⓞ</sup> §	Congestion Relief/TDM	\$\$			
1	Papakura Interchange Upgrade Stage 1 <sup>Ⓞ</sup> §	Congestion Relief/TDM	\$\$			
2	Kopuku Realignment <sup>Ⓞ</sup>	Safety	\$\$\$			
1	AHB Storm Water Upgrade <sup>Ⓞ</sup>	Environmental	\$			
1	Schedewys Hill Deviation <sup>Ⓞ</sup>	Safety	\$\$\$			
<b>Projects inside 6-10 year Forecast</b>						
1	Constellation to Albany I/C	Congestion Relief/TDM	\$\$\$			
20	Mangere to Puhinui 6L	Congestion Relief/TDM	\$\$\$			
	Integrated Transport Control Centre	Congestion Relief/TDM	\$\$			
20A	Kirkbride Rd Grade Separate <sup>Ⓞ</sup>	Congestion Relief/TDM	\$\$\$			
<b>Small and Medium Projects (Priority Order)</b>						
1	Greenlane East Interchange	Congestion Relief/TDM	4.15			
1	Main Highway – Ellerslie Highway Nth Bd Aux	Congestion Relief/TDM	0.50			
20	Queenstown Rd Roundabout	Congestion Relief/TDM	1.34			
1	Orewa Township Upgrade	Safety	\$			
1	Papakura Interchange Signals §	Route Efficiency	\$			
1	AHB Northern Approach Sth Bd Lane Light Trial	Congestion Relief/TDM	\$			
1	Drury Interchange Traffic Signals	Congestion Relief/TDM	\$			

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

<sup>Ⓞ</sup> denotes regionally distributed funds

§ in conjunction with third party contributions outside NLTP funding

# Auckland State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07		6-10 Year Forecast
				2-5 Year Plan	Year Forecast	
I	Ellerslie SB Off-ramp Slip Lane	Congestion Relief/TDM	\$			
20	Roscommon / Wiri Station Rd Intersection	Congestion Relief/TDM	\$			
I	East Tamaki To Te Irirangi Nth Bd BPL	Congestion Relief/TDM	\$			
16	Te Atatu Nth On-ramp to Whau Bridge Citybound BPL	Congestion Relief/TDM	\$			
16	Rosebank Off-ramp to Patiki On-ramp BPL	Congestion Relief/TDM	\$			
I	Southern/Northern Motorway Lighting Safety Retrofit.	Safety	\$			
I	Stafford – Esmonde BPL	Congestion Relief/TDM	\$			
	Relocatable VMS	Congestion Relief/TDM	\$			
	Portable CCTV	Congestion Relief/TDM	\$			
	Moveable VMS	Congestion Relief/TDM	\$			
16	Quay St – Ronayne Upgrade	Congestion Relief/TDM	\$			
16	Taupaki Rd/Old Nth Rd Intersection Upgrade	Safety	\$			
I	AHB Structural Upgrade	Route Efficiency	\$			
16	Northwestern Motorway Lighting Safety Retrofit	Safety	\$			
16	Waitangi Bridge to Basil Orr Road Seal Widening	Safety	\$			
I	Wayby Valley Road Intersection	Safety	\$			
16	Whau Bridge to Patiki Rd Off-ramp Citybound BPL	Congestion Relief/TDM	\$			
22	Glenbrook Rd Intersection Improvement <sup>®</sup>	Safety	\$			
16	Don Buck Rd – Brigham Creek Rd SI <sup>®</sup>	Safety	\$			

<sup>®</sup> denotes regionally distributed funds

## Auckland State Highway Plan and Forecast for 2006/07 to 2015/16

### Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)			Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M	\$\$ 5-20M	\$\$\$ 20-100M			
<b>Passing Lanes (Priority Order)</b>								
I6	Old Railway Rd East Bd PL	Safety						
I	Hoteo River Sth Bd PL	Safety						
I	Waitaraire Sth Bd PL	Safety						
I	Toovey Rd Sth Bd PL	Safety						
I	Sheepworld Sth Bd PL	Safety						
22	Wesley College Nth Bd PL	Safety						
I6	Kumeu No.2 Bridge West Bd PL <sup>®</sup>	Safety						
<b>Stock Effluent Disposal Facility</b>								
I	Wellsford	Environmental						
I	Bombay Hills	Environmental						
<b>Walking &amp; Cycling</b>								
I6	Westgate Pedestrian Facility	Access						
<b>Strategic Studies</b>								
SH18 Upper Harbour Corridor – Albany to Constellation (committed)								
Northern Busway Extension to Orewa (committed)								
Onehunga to East Tamaki (committed)								
SH1/16 Auckland to Wellsford								
SH1 Waitemata Harbour Crossing								
Auckland State Highway Strategy								

<sup>®</sup> denotes regionally distributed funds



## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Waikato's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Waikato Region include:

- › Safety: the Waikato state highway network has the highest fatal crash densities in the country, 20 percent higher than any other region. It has 20 of the nation's 100 worst "black routes", with a high frequency of serious and fatal crashes
  - › Long-haul routes: the Waikato is part of a growth triangle linking major export hubs, population centres and tourist attractions in Auckland, Waikato and the Bay of Plenty. A number of the country's strategic corridors with high proportions of heavy vehicles go through the Waikato, contributing to a complex mix of local, inter-regional and tourist traffic
  - › Congestion and bottle necks: rapid population and development growth in and around Hamilton, and to a lesser extent Cambridge and Taupo, is causing congestion and increasing travel delays and transport costs for long-haul travellers, as well as a deterioration of environmental and amenity values for the communities that these long-haul routes pass through
- Large volumes of vehicles are diverting onto unsuitable alternative routes to avoid delays, with resultant impacts on safety and economic development
- › Forestry traffic: over the next 5 to 10 years forestry harvesting is expected to increase from 10 to 12 million tonnes from Central Plateau forests, with much of the product to be exported through the Port of Tauranga
  - › Hamilton growth: there is significant pressure for commercial access and growth in northern and western Hamilton, and this combined with the development of the Crawford Street rail freight village, is putting significant pressure on the Hamilton Western Corridor, which also has a local road function. Transit will work closely with its transport partners to build on the Access Hamilton Strategy, which seeks a balance between roading, rail, passenger transport, and active modes to manage demand
  - › Tourist traffic: particularly in Taupo and on the Coromandel Peninsula (where the number of domestic holidaymakers is also a significant issue), and on the routes linking Auckland, Waitomo Caves, Lake Taupo, and Rotorua
  - › Route Security: interruption of the state highway network because of bad weather and slips, particularly on the SH1 Desert Road and on SH3 through the Awakino Gorge, has a significant economic impact nationally as well as on the Taranaki region and the local communities
  - › Spillages from stock trucks.

## How we plan to address these key issues

The Waikato Expressway is the highest priority transport issue for the region. A significant component of this Expressway between Mercer and Longswamp will be completed in 2006/07 and further progress will be made on the remaining components over the next 10 years. This will in time, reinforce SH1 as the preferred long haul route, together with SH29 to the Bay of Plenty from Auckland.

The SH2 Maramarua Corridor and SH27 are expected to remain as attractive routes for long haul traffic in the short to medium term and Transit will undertake any safety work necessary on this corridor, together with passing opportunity improvements.

Improvements are proposed to the Hamilton Western Corridor in partnership with Hamilton City Council. This will include the identification and protection through the planning process of the strategic transport corridors in south Hamilton. Transit will also consider a number of projects on the existing routes in the meantime to relieve congestion and improve efficiency.

Transit is also considering improvements to route security for the region on the Thames Coast and on SH3 between Taranaki and the Waikato.

A number of walking and cycling activities are also planned to complement the strategies and work of the various territorial authorities.

Studies are currently underway to look at increasing safety on the black routes. Further studies have also been identified and will be undertaken in the coming year. Projects identified from these studies will be added to future forecasts. The study areas are:

- › Hamilton City Urban Area
- › SH27 Mangatarata to Tatuani
- › SH1 Taupiri to Hamilton South
- › SH39 Whatawhata to Otorohanga.

Large improvement activities (with construction costs of more than \$3.4M), have been indicated for 10 years, while activities with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Waikato projects in the 10-year State Highway Forecast are shown on the map.

## Congestion and Strategic Corridor Improvements

Transit expects to design and commence the Rangiriri Bypass within five years as well as making significant progress with the Cambridge and Ngaruawahia Bypasses within 10 Years. We are planning to progress the design of the Huntly and Hamilton Bypasses within the five-year period. Transit will work with the region to consider tolling opportunities and through the development of the Regional Land Transport Strategy to determine whether the next priority will be the Huntly Bypass or the Hamilton Bypass.

The Church to Avalon 4-lane project and the Avalon Drive Bypass project will be completed within five years. Construction of the Te Rapa Bypass will commence, subject to completion of the planning and land purchase requirements and also subject to the agreement of a funding package with Hamilton City Council. The strategic routes for Southern Links in the south Hamilton area will also be identified and designated within five years.

A number of small intersection improvement projects are also proposed in Hamilton City, together with one in Cambridge to relieve congestion and improve the efficiency of the existing network in the meantime.

Transit will continue to work with Taupo District Council on the East Taupo Arterial and has included the construction of Stage 4 within five years to complement stages 1, 2 and 3, which the council is proposing to construct. This is dependent on planning and land acquisition issues being resolved.

A replacement for the single lane Kopu Bridge is currently being designed and its construction will be progressed to assist with the high volumes of traffic visiting the Coromandel Peninsula, particularly on weekends and public holidays.

A number of strategic studies will be undertaken to determine strategies for a number of other corridors in the Waikato.

## Safety

The Maramarua Deviation has been designated in 2005/06 and the design will be carried out within five years and the construction started within five years. This will complement the work commencing in 2006/07 on the Mangatawhiri Deviation and the double passing lanes to the east at the Heavens rest area that have just been completed.

The Piarere to Oak Tree Bend safety project on SH1 south of Cambridge will also commence as soon as the land purchase issues are resolved.

A number of small safety projects will be constructed in the next five years, together with the continued “black route” safety work, including removal of roadside hazards, between Tokoroa and Taupo and at new identified sites around the Waikato.

## Route Security and Availability

Design and construction is planned to follow the investigation work already undertaken for the replacement of bridges at Te Puru, Tararu and Kirikiri on SH25, Thames Coast, as part of Project Peninsula, a multi-agency flood protection package.

The Taranaki region has agreed to the utilisation of their \$R funding for the construction of improvements in the Awakino Gorge, including the Awakino North Realignment and the Awakino Tunnel Widening. These will be carried out within the next five years.

Three projects are planned to provide better road information to the travelling public on the Coromandel Peninsula, in North Waikato on the SH1 and SH2 Corridors and in Taupo.

## Passing Opportunities

A passing lane on SH1 at Kinleith North will be completed in 2006/07 and this will be complemented by two more north of Taupo and one south of Turangi, while another, at Motuoapa south of Taupo, will be developed ready for construction. Extensions to the north and southbound passing lanes on SH2 at Campbell Road near Waihi are also planned, as is a passing lane and a slow vehicle bay on SH25A.

The Taranaki region has agreed to use their \$R funding for the construction of a passing lane at the Awakino Tunnel on SH3.

## Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities, new facilities will be constructed on SH1 at Putaruru and on SH3 at Te Kuiti.

## Walking and Cycling

Improvements for walking and cycling are proposed in Hamilton City, Cambridge, Taupo and Te Awamutu.

## Strategic Studies

Transit proposes to undertake a number of strategic studies to improve our long-term planning and assist good decision-making, together with studies that lead to sustainable environmental outcomes. These studies include a Lake Taupo Stormwater Runoff Environmental Scoping Study, corridor studies of SH2/29 Pokeno to Hairini, “Ruapehu around the mountain”, and Tokoroa to Turangi, and passing lane strategies for SH1/5 and SH27.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.







Maintenance activities make up a large proportion of the forecast expenditure in the Waikato region.



















In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Undertake 216km of resurfacing, including 20km with low noise surfacing
- › Strengthen 40km of highway
- › Continue improving techniques to manage highways in winter
- › Improve the management of Kopu Bridge holiday traffic and bridge openings for river users
- › Target noise reduction works for specific problem areas
- › Improve traffic and travel demand management by upgrading signals and dynamic signage to provide real time information for road users in Hamilton
- › Implement plant pest strategies and use special plant pest eradication programmes to target hotspots
- › Implement planting to reduce future maintenance on steep slopes or batters next to highways
- › Continue to implement and maintain special safety programmes in areas or corridors with poor road safety records, including identified “black routes”
- › Introduce thermal mapping of the inland network to better predict where ice will occur.

# Waikato State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Year Forecast		
				2-5	6-10	Year Forecast
			\$ < 5M	\$ 5-20M	\$ 20-100M	\$ 100+M
<b>Large Projects (Committed)</b>						
2	Mangatawhiri Deviation	Safety	45.3			
I	Mercer to Long Swamp 4L	Route Efficiency	0.39			
25	Kopu Bridge Replacement	Congestion Relief/TDM	0.96			
I	Te Rapa Bypass	Congestion Relief/TDM	1.00			
<b>Large Projects (Priority Order)</b>						
I	Church to Avalon Drive 4L §	Congestion Relief/TDM	\$\$			
I	Avalon Drive Bypass	Route Efficiency	\$\$\$			
I/3	Hamilton Southern Links	Route Efficiency	\$\$\$\$			
I	Te Rapa Bypass §	Congestion Relief/TDM	\$\$\$\$			
2	Maramarua Deviation ©	Safety	\$\$\$			
I	Huntly Bypass	Route Efficiency	\$\$\$\$			
I	Ngaruahia Bypass Part ©	Route Efficiency	\$\$\$\$			
I	Hamilton Bypass	Route Efficiency	\$\$\$\$			
I	East Taupo Arterial ©	Route Efficiency	\$\$\$			
I	Cambridge Bypass 2L ©+©	Route Efficiency	\$\$\$			
I	Rangiriri Bypass	Route Efficiency	\$\$\$			
I	Piarere – Oak Tree Bend Realign	Safety	\$\$			
25	Kopu Bridge Replacement	Congestion Relief/TDM	\$\$\$			
I	Long Swamp to Rangiriri 4L	Route Efficiency	\$\$\$			







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

© denotes regionally distributed funds  
 © denotes crown funding  
 § in conjunction with third party contributions outside NLTP funding



## Waikato State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
				\$ < 5M	\$ 5-20M	\$ 20-100M
<b>Projects inside 6-10 year Forecast</b>						
27	Kaihere Eastern Deviation (Investigation) <sup>Ⓞ</sup>	Safety	\$ \$			
21	Narrows Bridge Realign (Investigation) <sup>Ⓞ</sup>	Route Efficiency	\$ \$			
<b>Small and Medium Projects (Priority Order)</b>						
2	Maramarua Expressway SI	Safety	0.53			
25	Te Puru Stream Bridge Replacement	Route Security	\$			
25	Tararu Stream Bridge Replacement	Route Security	\$			
26	Kirikiri Stream Bridge Replacement	Route Security	\$			
I	Piarere Junction Safety Improvement	Safety	\$			
	Waikato Road Information System	Congestion Relief/TDM	\$			
I	Hillcrest & Morrinsville Rd Intersection	Congestion Relief/TDM	\$			
I	SWATT 2010 Stage 2 Tokoroa to Taupo	Safety	\$			
I	Taupo Road Information System	Congestion Relief/TDM	\$			
27	Tahuna Road Roundabout	Safety	\$			
I	Victoria to Queen Street Intersection	Route Efficiency	\$			
25	Coromandel Road Information System	Route Efficiency	\$			
31	Owaikura Road North Realignment	Safety	\$			
I	Ohaupo/Kahikatea Intersection	Congestion Relief/TDM	\$			
I	Tregoweth Lane Intersection	Route Efficiency	\$			

<sup>Ⓞ</sup> denotes regionally distributed funds

# Waikato State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)			Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M	\$\$ 5-20M	\$\$\$ 20-100M			
3	Awakino North Realignment <sup>Ⓞ</sup>	Route Efficiency		\$				
3	Awakino Tunnel Widening <sup>Ⓞ</sup>	Route Efficiency		\$				
I	Greenwood / Killarney Intersection <sup>Ⓞ</sup>	Route Efficiency		\$				
26/27	Intersection Improvement <sup>Ⓞ</sup>	Safety		\$				
	Gallagher Road Intersection <sup>Ⓞ</sup>	Route Efficiency		\$				
39	Kiwi Road Realignment <sup>Ⓞ</sup>	Safety		\$				
<b>Passing Lanes (Priority Order)</b>								
I	Kinleith North PL	Safety			0.75			
I	Rangipo Nth Bd PL	Safety		\$				
2	Campbell Road Sth Bd PL extension	Safety		\$				
25A	One Ton West PL	Safety		\$				
I	Tutukau Rd South PL	Safety		\$				
I	Maroa Rd North PL	Safety		\$				
I	Motuoaapa Nth Bd PL	Safety		\$				
2	Campbell Road Nth Bd PL extension	Safety		\$				
25A	Piranui Saddle SVB	Safety		\$				
3	Awakino Tunnel Nth Bd PL <sup>Ⓞ</sup>	Safety		\$				

<sup>Ⓞ</sup> denotes regionally distributed funds

# Waikato State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

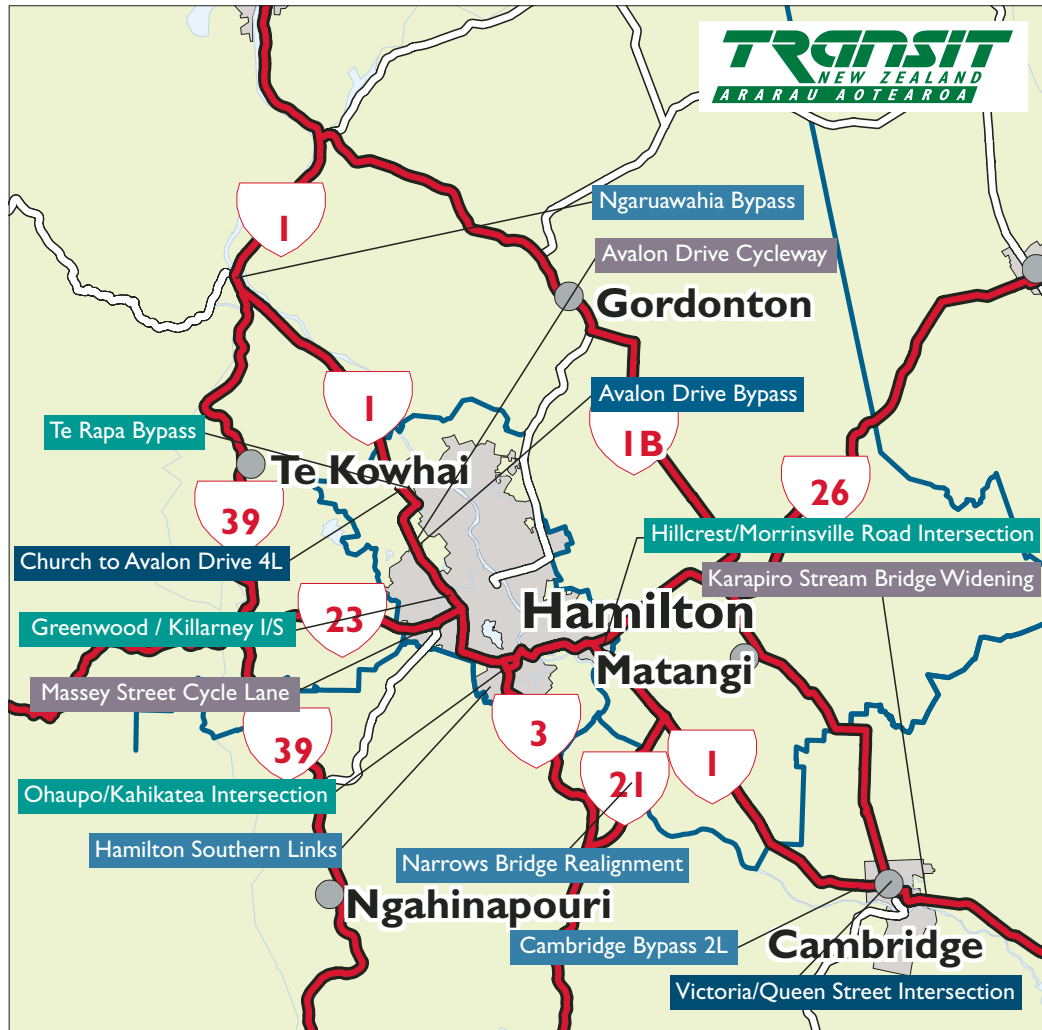
The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
<b>Stock Effluent Disposal Facility</b>						
1	Putaruru	Environmental	\$			
3	Te Kuiti	Environmental	\$			
<b>Walking &amp; Cycling</b>						
1	Avalon Drive Cycleway	Access	\$			
23	Massey Street Cycle Lane	Access	\$			
1	Karapiro Stream Bridge Widening	Access	\$			
1	Control Gates Hill Cycle Lane	Access	\$			
3	Mangapiko Bridge Footpath Widening	Access	\$			
<b>Strategic Studies</b>						
	SH2/29 Auckland to Tauranga (committed)					
	Hamilton Southern Links					
	SH1 Kahikatea Dr, Hamilton					
	SH1/32 Tokoroa to Turangi					
	Lake Taupo Stormwater Runoff Environmental Scoping Study					
	SH2/29 Pokeno to Hairini					
	SH1/5 Passing Lane Strategy					
	SH27 Passing Lane Strategy					
<b>Route Safety Treatment Studies</b>						
1	Taipiri to Hamilton South					
39	Whatawhata to Otorohanga					

Fig WK Inset

# WAIKATO REGION – Inset Map

State Highway Network at 01 July 2006



	KEY	
	5-year Planned Projects	Forecast Projects
Safety	<span style="display:inline-block; width:15px; height:15px; background-color:red;"></span>	<span style="display:inline-block; width:15px; height:15px; background-color:orange;"></span>
Route Security	<span style="display:inline-block; width:15px; height:15px; background-color:yellow;"></span>	<span style="display:inline-block; width:15px; height:15px; background-color:lightyellow;"></span>
Route Efficiency	<span style="display:inline-block; width:15px; height:15px; background-color:blue;"></span>	<span style="display:inline-block; width:15px; height:15px; background-color:lightblue;"></span>
Walking and Cycling	<span style="display:inline-block; width:15px; height:15px; background-color:grey;"></span>	<span style="display:inline-block; width:15px; height:15px; background-color:lightgrey;"></span>
Environmental	<span style="display:inline-block; width:15px; height:15px; background-color:green;"></span>	<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen;"></span>
Congestion Relief/TDM	<span style="display:inline-block; width:15px; height:15px; background-color:teal;"></span>	<span style="display:inline-block; width:15px; height:15px; background-color:lightteal;"></span>
Passing Lanes (PL)	<span style="display:inline-block; width:15px; height:15px; background-color:purple;"></span>	<span style="display:inline-block; width:15px; height:15px; background-color:lightpurple;"></span>



## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as the Bay of Plenty's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Bay of Plenty Region include:

- › Road safety: particularly safe interaction of heavy freight traffic with general traffic, as well as tourist traffic
- › Congestion: rapid population and development growth in the Bay of Plenty, particularly in the western Bay of Plenty sub-region and in and around Tauranga, is causing significant congestion, together with safety problems
- › Forestry traffic: over the next five to ten years, forestry harvesting is expected to increase from 10 million to 12 million tonnes a year from the Central Plateau forests, and much of the product will be exported through the Port of Tauranga
- › Tourist traffic: particularly around Rotorua and the Urewera National Park
- › Route security: interruption of the state highway network because of flooding and slips, particularly in the eastern Bay of Plenty between the East Cape (Gisborne), Opotiki District and Whakatane District, has a significant economic impact on the forestry and dairy industries, as well as on local communities
- › Spillages from stock trucks.

## How we plan to address these key issues

The Tauranga Central Corridor is one of the most congested corridors in the state highway network and substantial improvements are planned.

The Tauranga Eastern Corridor is also very congested and will be put under further pressure by the substantial growth planned for Papamoa. Transit is working with its Smart Transport partners (Tauranga City Council, Western Bay of Plenty, and Environment Bay of Plenty) to develop the Tauranga Eastern Corridor in a manner that integrates the proposed land use with transport systems to achieve a sustainable balance.

Progress will be made towards determining strategies for the remaining Strategic Corridors in the Bay of Plenty the strategic study planned for the Tauranga Northern Corridor will take into account the review of the long term function of the highway and design work for a appropriate Tauranga Northern arterial will be undertaken.

Several small projects and other activities under maintenance and operations are targeted at improving route security in the eastern Bay of Plenty, particularly in Matata where Transit is working closely with the Whakatane District Council, Environment Bay of Plenty and ONTRACK on a package of activities following the recent severe flooding.

Large improvement activities (with construction costs of more than \$3.4M), have been indicated for 10 years, while activities with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Bay of Plenty projects in the 10-year State Highway Forecast are shown on the map.

## Congestion and Strategic Corridor Improvements

The Hewlett's Flyover project was completed in 2005/06 and Transit now proposes to complement this by progressing Harbour Link as a full state highway project. The first stage of the project will be the completion of the four-laning of Hewlett's Road in 2006/07. This will be followed by the duplication of the Harbour Bridge and a four-lane flyover from the Harbour Bridges to Takitimu Drive. The objective is to increase road capacity, provide bus lanes where possible to encourage better utilisation of public transport, and provide walking and cycling facilities that will encourage people to use these modes of transport.

In addition, a range of travel demand management initiatives will be identified and implemented on the Central Corridor over the next three years, to complement road capacity improvements.

The design of the Tauranga Eastern Motorway has been moved forward to commence in 2006/07, to allow Transit to work with its Smart Transport partners to get a better understanding of the costs and risks of developing a package of transport activities to integrate with and complement the significant proposed land use changes. This will allow the Smart Transport partners to develop a joint funding package to progress the various construction works.

Investigation work is proposed for growth areas on the northern corridor at Katikati and Omokoroa as well as design work for the Tauranga Northern Corridor.

Transit proposes to continue to work with Tauranga City Council and the developers at Pyes Pa to complete the remaining stages of Pyes Pa Bypass. Stage 1 of the Bypass was completed in 2005/06 by the developer as a contribution necessary to accommodate growth and to maintain the functionality of the transport system, including the state highway network.

The Gaslines Curves Realignment on SH5, the Matata Underpass Realignment and the Paengaroa Weighstation on SH2 are all under construction and will be completed in 2006/07.

## Safety

There are three safety projects being undertaken. Installation of a guardrail on SH33 and the widening of two bridges on SH36 Rotorua/Tauranga Twin City Corridor. Further work in removing roadside hazards will continue.

If the Bay of Plenty region agrees to the utilisation of their \$R funding a number of additional small projects could be progressed including further bridge and seal widening, intersection improvements and a bridge replacement at Waitahanui on SH2 if land purchase can be resolved.

## Route Security

Replacement of the Reids Canal Bridge and flood protection improvements at the Awaiti Stream Bridge on SH2 near Matata are planned as part of an integrated package of flood protection works.

## Passing Opportunities

Transit will construct passing lanes north and south of Katikati on SH2 and also a further one on SH5 near Rotorua if the region agrees to \$R funding.

## Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities, new facilities will be constructed on SH2 at McLarens and near Opotiki.

## Strategic Studies

The Bay of Plenty has identified eight strategic corridors in their proposed Regional Land Transport Strategy review. Two of these corridors are the Tauranga Central and Eastern Corridors and are well understood. Transit propose to undertake strategic studies on the remaining six strategic corridors, including Tauranga Northern and South-western Corridors, three Rotorua Corridors (Southern, Eastern Lakes and Rotorua Central) and the Eastern Bay of Plenty Corridor, to improve our long-term planning and assist good decision-making.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur, and where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

Maintenance and operations activities make up a key part of the forecast expenditure in the Bay of Plenty Region. In addition to maintaining current and future levels of service, and preserving the asset, we propose to:

- › Undertake 92km of resurfacing, including 8km with low noise surfacing
- › Strengthen 12km of highway
- › Improve the road network in the eastern Bay of Plenty to safeguard the state highway in times of flood
- › Target noise reduction works for specific problem areas
- › Improve traffic and travel demand management by upgrading signals and dynamic signage to provide real time information for road users in Tauranga and Rotorua
- › Implement plant pest strategies and use special plant pest eradication programmes to target hotspots
- › Carry out planting to reduce future maintenance on steep slopes or batters next to highways
- › Continue to implement and maintain special safety programmes in areas with poor road safety records, including identified “black routes”.

## Bay of Plenty State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M) \$ < 5M    \$\$\$ 20-100M \$\$ 5-20M    \$\$\$\$ 100+M	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
<b>Large Projects (Committed)</b>						
29	Hewletts Flyover	Congestion Relief/TDM	2.5			
	Harbour Link	Congestion Relief/TDM	0.15			
<b>Large Projects (Priority Order)</b>						
	Tauranga Central Corridor TDM	Congestion Relief/TDM	\$			
	Harbour Link	Congestion Relief/TDM	\$\$\$\$			
2	Tauranga Eastern Motorway @+@ \$	Route Efficiency	\$\$\$\$			
36	Pyes Pa Bypass @ \$	Route Efficiency	\$			
2	Katikati Bypass \$	Route Efficiency	\$\$\$			
2	Omokoroa Roundabout @ \$	Route Efficiency	\$			
2	Tauranga Northern Arterial @	Route Efficiency	\$\$\$\$			
<b>Small and Medium Projects (Priority Order)</b>						
5	Gasline Curves Realignment	Safety	1.9			
2	Matata Underpass Realignment	Route Efficiency	0.5			
2	Paengaroa Weighstation	Route Security	\$			
2	Reids Canal Bridge Replacement	Environmental	\$			
2	Awaiti Stream Bridge Flood Protection	Environmental	\$			
33	Maniatutu Rd North Guardrail	Safety	\$			

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

@ denotes regionally distributed funds  
 © denotes crown funding  
 \$ in conjunction with third party contributions outside NLTP funding



# Bay of Plenty State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$\$ 20-100M \$\$\$\$ 100+M			

### Small and Medium Projects (Priority Order)

36	Mangarewa Stream North Bridge Widening	Safety	\$			
36	Mangapouri Bridge Widening	Safety	\$			
5	Fairy Springs 4L Stage 2	Route Efficiency	\$			
36	Mangarewa Stream South Bridge Widening ®	Safety	\$			
36	Hamurana to Te Waerenga Rd Seal Widening ®	Safety	\$			
36	Waiteti Rd Intersection ®	Safety	\$			
2	Waitahanui Bridge Replacement ®	Safety	\$			

### Passing Lanes (Priority Order)

2	Wharawhara Rd PL	Safety	\$			
2	Kauri Point PL	Safety	\$			
5	Maraeroa PL ®	Safety	\$			

### Stock Effluent Disposal Facility

2	Opotiki	Environmental	0.38			
29	McLarens	Environmental	\$			

### Strategic Studies

- Whakatane Transportation Strategy (committed)
- Tauranga Northern and South-western Corridors
- Eastern Bay of Plenty Corridors
- Rotorua Central, Eastern Lakes, and Southern Corridors

® denotes regionally distributed funds



## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Gisborne's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for Gisborne include:

- › Road safety
- › Forestry traffic is expected to maintain the current levels around 2.5 to 3.0 million tonnes a year. Harvesting rates are predicted to stay at this level for the next 20 years. This will require a good transportation system
- › Route security and efficiency on SH2, particularly to the north via Waioeka Gorge and to the south via Matahorua Gorge, and on SH35 along the Waiapu River
- › Tourist traffic.

## How we plan to address these key issues

SH2 in the Gisborne region runs through a variety of terrain, including plains, coastal sections and river gorges in mountainous country. Terrain around SH35 is also varied, comprising a narrow coastal margin of rocky bays and headlands on the north coast and a mixture of this and largely pastoral hill country on the east coast.

Land use around SH2 is primarily dairying, horticulture, conservation, recreation activity and exotic forestry. The principal land use around SH35 is dairy and pastoral farming, with small commercial, residential, tourism and fishing activities interspersed along the highway.

The two main shipping ports for the region are in Tauranga and Gisborne. Although a smaller port at Gisborne, has a throughput of 500,000 tonnes a year which consists primarily of logs for export.

A small rural realignment project is planned for SH2, and on SH35 seal widening and a number of slow vehicle bays are planned.

Large improvement projects (with construction costs of more than \$3.4M) have been indicated for 10 years, while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Gisborne projects in the 10-year State Highway Forecast are shown on the map.

## Road Safety – Secure and Efficient Transport Corridors

Transit plans to continue improving the safety and efficiency of state highways. A number of large, medium and smaller activities have been proposed, including a programme of seal widening on SH35 that will be staged and consist largely of projects north and south of Tolaga Bay. Further work on the management or removal of roadside hazards will continue.

## Stock Effluent

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities, Transit intends to review the North Island stock effluent strategy to identify an appropriate site for the Gisborne region.

## Passing Opportunities

The alignment of SH35 north of Gisborne restricts opportunities for passing, leading to driver frustration and accidents. Two slow vehicle bay projects have been identified on SH35 for progress.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

Maintenance activities make up a large proportion of the forecast expenditure in the Gisborne region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Resurface 57km and reconstruct 15km of highway to improve the ride comfort level and meet national state highway targets
- › Improve the level of service provided on subsidence sites on SH35 by undertaking the first stage of a programme to improve the stability of such sites more quickly and reliably
- › Widen the carriageway to target seal widths as part of maintenance activities, when appropriate and affordable
- › Provide a more forgiving roadside environment to reduce the severity of accidents
- › Continue to focus on low skid resistance sites to maintain the high standard of surface friction performance achieved to date
- › Improve safety and prevent road blockages on areas of the state highway with a high incidence of rock falls
- › Improve our response to ice on state highways to reduce winter crash rates
- › Look for opportunities to reduce roadside noise in urban areas
- › Ensure roads are able to stay open in storm events
- › Improve roadside drainage facilities
- › Continue with improvements in traffic management at incidents on the network.

# Gisborne State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

			
Committed Investigation	Committed Design	Committed Construction	Committed Construction
			
Investigation	Design	Construction	Construction

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M

**Large Projects (Priority Order)**

35 Tolaga - Gisborne Seal Widening <sup>®</sup> Safety \$

**Projects inside 6-10 year Forecast**

35 North Tolaga Seal Widening (investigation) <sup>®</sup> Route Efficiency \$

**Small and Medium Projects (Priority Order)**

2 Curve North of Kaiteratahi Hill <sup>®</sup> Safety \$

**Passing Lanes (Priority Order)**

35 Slow Vehicle Bays Stage I Safety \$

35 Panikau Hill Slow Vehicle Bay <sup>®</sup> Safety \$

<sup>®</sup> denotes regionally distributed funds

The grey symbols show indicative timings given that the investigation or design phase has not been completed.




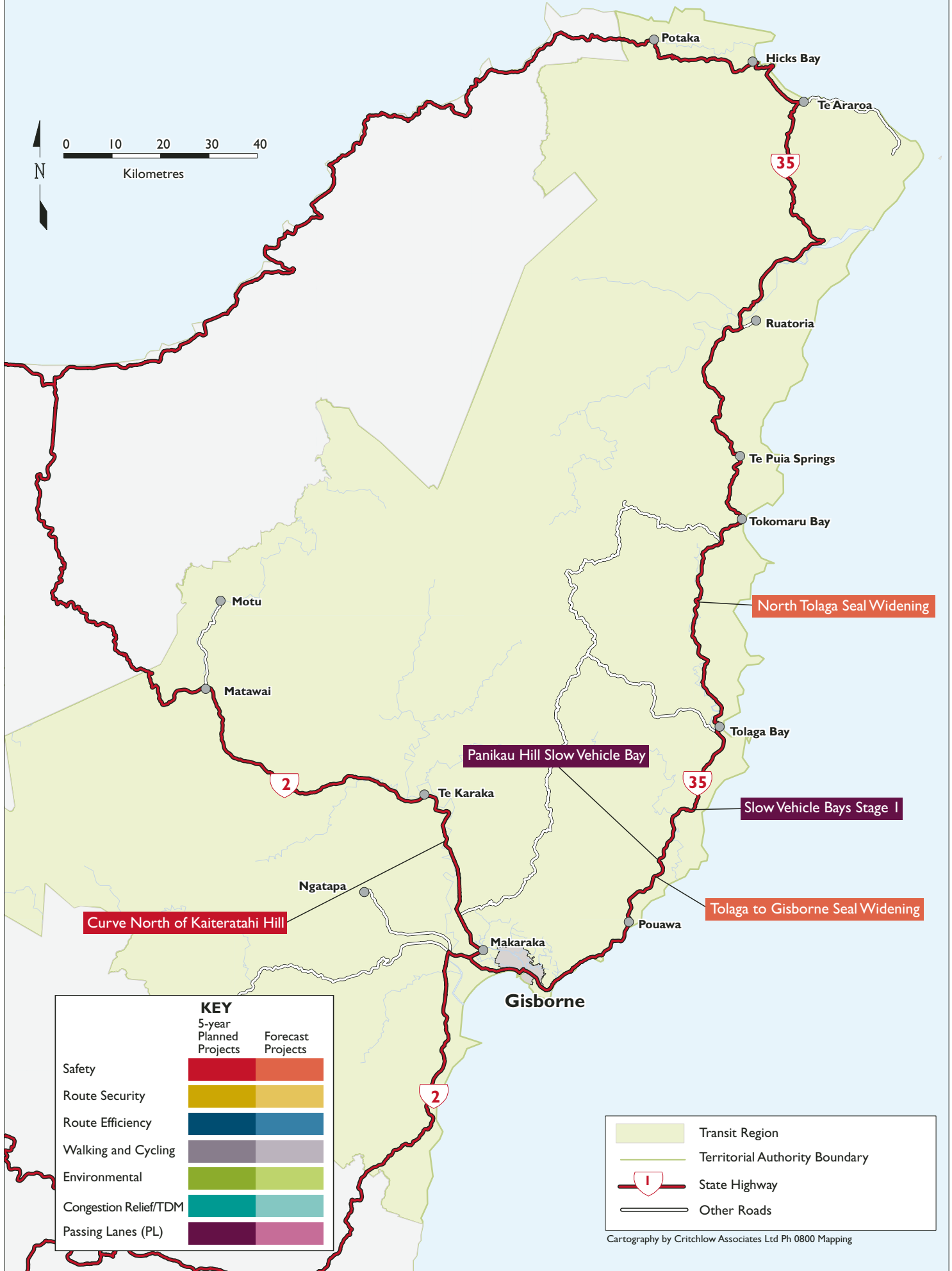
Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
		

Fig G

# GISBORNE REGION

State Highway Network at 01 July 2006



	5-year Planned Projects	Forecast Projects
Safety		
Route Security		
Route Efficiency		
Walking and Cycling		
Environmental		
Congestion Relief/TDM		
Passing Lanes (PL)		

	Transit Region
	Territorial Authority Boundary
	State Highway
	Other Roads

Cartography by Critchlow Associates Ltd Ph 0800 Mapping



### KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Hawke's Bay's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the Hawke's Bay include:

- › Road safety
- › Forestry traffic has been growing but is likely to level off at around 1 million tonnes per year, most of which will be exported through the Port of Napier
- › Stone fruit, process cropping, food and wood processing and viticulture are growing industries and demands on the road network are increasing
- › Access to the Port of Napier
- › Route security and efficiency on SH2 to the north through the Matahoura Gorge
- › Route efficiency to the south and around the Heretaunga Plains
- › Tourist traffic, particularly in Urewera National Park
- › Environmental impacts of major transport routes through urban and suburban areas.

### How we plan to address these key issues

The terrain in the Hawke's Bay is variable, with SH2 in the south generally flat from Napier and becoming flat to rolling around Waipukurau, and then rising gently up to the Takapau Plains. A number of passing lanes have been constructed already to improve efficiency, with four others planned.

SH2 north is aligned parallel to the east coast and is generally characterised as a moderate speed route traversing flat, rolling and mountainous terrain up to a maximum elevation of 500 metres above sea level.

A passing lane strategy from Wairoa to Napier is currently underway to investigate passing opportunities to reduce delays. The strategy will provide a mechanism to identify and prioritise the most appropriate passing lanes for this length.

SH5, from the SH2 junction to Waipunga (6km north of Tarawera), runs through hilly to rolling country with several steep grades. This section of highway is known to have some areas of instability, which become evident after prolonged wet weather. Transit will continue to seek engineering solutions to stabilise such areas. Logging traffic to the ports of Napier and Tauranga and increasing horticulture and viticulture add to the increasing traffic demand on this highway. The route also carries all the traffic from the Heretaunga Plains area to Taupo, including the majority of northbound heavy haulage imports and exports out of Hawke's Bay because there is no rail connection, other than at Palmerston North. Various realignments and passing lanes are planned.

SH38 from Aniwanuiwa to Wairoa climbs from sea level at Wairoa to a maximum elevation of 660 metres. SH38 provides access for tourists to Te Urewera National Park. Minor safety improvements are planned for this highway.

SH50A comprises a section of the Hawke's Bay Expressway from Links Road through to York Avenue. Investigations are planned for 2006/07 to extend the expressway further south. This will ultimately reduce delays and crashes at the Maraekakaho Road/York Road intersection.

Large improvement projects (with construction costs of more than \$3.4M) have been indicated for 10 years while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Hawke's Bay projects in the 10-year forecast are shown on the map.

## Road Safety – Secure and Efficient Transport Corridors

Transit will continue improving the safety and efficiency of state highways and provide a network of stock truck effluent disposal facilities. A number of large, and small to medium activities have been proposed. These include realignments, intersection improvements, seal widening and guard rails. Further work on the management or removal of roadside hazards will continue.

## Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. To provide passing opportunities on SH2 in Hawke's Bay a significant number of projects have been identified for progress in the next three years. These include Napier Airport to Bay View and Gisborne to Napier Passing Bays to the north of Napier and six passing lanes south of Hastings.

## Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities a new stock effluent disposal facility is to be constructed on SH5 near Bay View. Other sites on SH2 will be investigated.

## Walking and Cycling

A cycling strategy is currently being prepared to identify walking and cycling projects in Bay View and between Napier and Hastings.

## Strategic Studies

We are proposing to undertake a strategic study for the Hawke's Bay region, to improve our long-term planning and assist good decision-making.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.






Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

Maintenance activities make up a large proportion of the forecast expenditure in the Hawke's Bay region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

















- › Resurface 75km and reconstruct 7km of highway
- › Carry out improvements to the surface of the unsealed section of SH38
- › Widen the carriageway to target seal widths as part of maintenance activities when appropriate and affordable
- › Provide a more forgiving roadside environment to reduce the severity of accidents
- › Continue to focus on low skid resistance sites to maintain the high standard of surface friction performance already achieved
- › Improve safety and prevent road blockages on areas of the state highway with a high incidence of rock falls
- › Improve the response to ice on state highways to reduce winter crash rates
- › Look for opportunities to reduce roadside noise in urban areas.

# Hawke's Bay State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.



SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
<b>Large Projects (Committed)</b>						
50A	Meeanee Rd Interchange	Safety	6.75			
<b>Large Projects (Priority Order)</b>						
50A	HB Expressway Southern Extension <sup>®</sup>	Route Efficiency	\$			
2	Waipukurau Overbridge Realignment <sup>®</sup>	Safety	\$\$			
5	Tarawera Hill Realignment and Sth Bd PL <sup>®</sup>	Safety	\$\$			
2	Matahonia Gorge Realignment <sup>®</sup>	Route Efficiency	\$\$			
2	Takapau Plains Seal Widening <sup>®</sup>	Safety	\$			
<b>Projects inside 6-10 year Forecast</b>						
2	College Road to Silverstream Realignment & PL	Safety	\$			
<b>Small and Medium Projects (Priority Order)</b>						
2	Tahaenui Bridge Replacement and Realignment	Safety	\$			
5	Dillons Hill Realignment	Safety	\$			
2	Meeanee Awatoto Rd Intersection Improvements	Safety	\$			
2	Moturoa Curve Realignment	Safety	\$			
2	South of Waikoau Rd Realignment <sup>®</sup>	Safety	\$			
2	Orane Intersection Curve Improvements <sup>®</sup>	Safety	\$			

<sup>®</sup> denotes regionally distributed funds



## Hawke's Bay State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M) \$ < 5M    \$\$ 5-20M    \$\$\$ 20-100M    \$\$\$\$ 100+M	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
<b>Passing Lanes (Priority Order)</b>						
2	South of Pukeora Rd PL	Safety	0.55			
2	Otane Cemetery PL	Safety	\$			
2	South of Te Aute Hill PL	Safety	\$			
2	Corkscrew Gully Nth Bd PL	Safety	\$			
2	Te Mahanga South PL	Safety	\$			
2	Gisborne - Napier Passing Bays	Safety	\$			
2	Poukawa Swamp North PL	Safety	\$			
2	Te Mahanga North PL	Safety	\$			
2	Napier Airport to Bay View PL	Safety	\$			
<b>Stock Effluent Disposal Facility</b>						
5	Bay View	Environmental	\$			
<b>Strategic Studies</b>						
Hawke's Bay State Highway Strategy (committed)						
SH2 Napier to Gisborne: Passing Opportunities						



## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Taranaki's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the Taranaki region include:

- › Road safety
- › Residential and industrial development to the north of New Plymouth
- › Route security and efficiency to the north via the Awakino Gorge and to the south via Hawera
- › Tourist traffic, including development of the "Forgotten World Highway".

## How we plan to address these key issues

The state highway network in Taranaki has been improved very significantly in recent years and is now generally of a high standard. The strategic significance of reliable state highway access to Taranaki is an important feature in planning for Transit's maintenance and preventive works programmes. While the emphasis for Transit in Taranaki is on maintaining the existing state highway network, there are a number of activities to improve road safety as well as route security and efficiency in the Taranaki region. A further priority is managing the connections between state highways and local roads, as well as access to state highways from adjacent land, to support the medium to long distance travel function of key arterial roads.

The realignment of the Normanby Road Overbridge south of Hawera is a recognised regional safety issue. Similarly the Rugby Road Underpass, also south of Inglewood, will provide a safer and more reliable route, particularly for heavy vehicles.

The Bell Block Bypass, North of New Plymouth, is a strategic route improvement between Paraitē Road and Egmont Road, bypassing a section of existing highway to reduce congestion and improve safety. The Bell Block Bypass leads into the proposed Mangaone Hill Four-laning project.

Large improvement projects (with construction costs of more than \$3.4M) have been indicated for 10 years while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Taranaki projects in the 10-year State Highway Forecast are shown on the map.

## Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of activities to improve the safety and efficiency of sections of SH3, for progress in the next five years, including road realignments, intersection improvements and bridge widening. Further work on the management or removal of roadside hazards will continue.

### Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. A passing lane project has been identified on SH3 for progress in the next three years, on Whareroa Road south of Hawera. To assess the requirement for further passing lanes in the Taranaki region a passing lane study is to be undertaken, on SH3 between Hawera and Wanganui.

### Walking and Cycling

The Devon Intermediate Pedestrian Facility on SH45 in Western New Plymouth will be progressed in the next three years.

### Strategic Studies

We are undertaking, or proposing to undertake, a number of strategic studies for the Taranaki region, including studies of New Plymouth North and Urban, a passing lane study and a study of Awakino Gorge, to improve our long term planning and assist good decision-making.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.






Maintenance and operations activities make up a large proportion of the forecast expenditure in the Taranaki region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Resurface 96 kilometres of the network
- › Carry out 7 kilometres of road pavement reconstruction
- › Improve the availability of road condition information at critical locations within the network.

# Taranaki State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

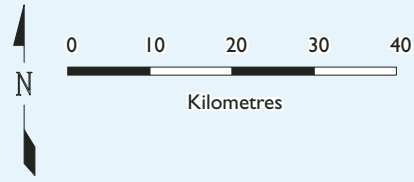
SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
<b>Large Projects (Priority Order)</b>						
3	Bell Block Bypass (including Mangaone 4L) <sup>Part</sup> <sup>®</sup>	Route Efficiency	\$\$\$			
3	Rugby Road Underpass <sup>®</sup>	Route Efficiency	\$\$			
3	Normanby Overbridge Realignment <sup>®</sup>	Route Efficiency	\$\$			
<b>Small and Medium Projects (Priority Order)</b>						
3	Mangorei Road Intersection	Safety	\$			
3	Tangahoe Bridge Widening <sup>®</sup>	Safety	\$			
3	Waitotara North Curve Improvement <sup>®</sup>	Safety	\$			
<b>Passing Lanes (Priority Order)</b>						
3	Whareroa Road South PL <sup>®</sup>	Safety	\$			
<b>Walking &amp; Cycling</b>						
45	Devon Intermediate Pedestrian Facility	Access	\$			
<b>Strategic Studies</b>						
	SH3 Awakino Gorge (committed)					
	Taranaki Passing Opportunities (committed)					
	New Plymouth Urban (joint study with New Plymouth District)					

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

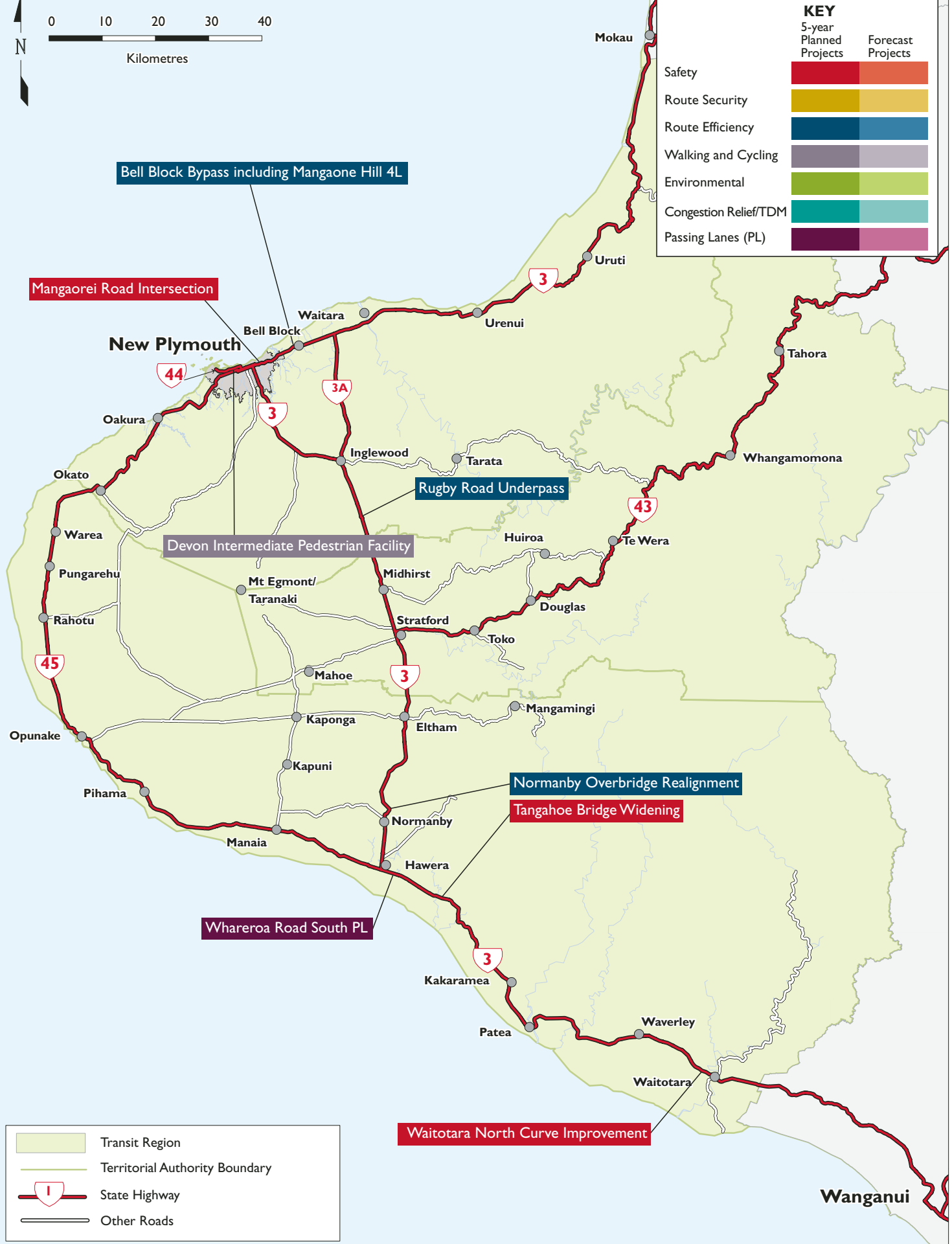
<sup>®</sup> denotes regionally distributed funds

# Fig T TARANAKI REGION

State Highway Network at 01 July 2006



	5-year Planned Projects	Forecast Projects
Safety	<span style="background-color: #c00000; width: 20px; height: 10px;"></span>	<span style="background-color: #e06666; width: 20px; height: 10px;"></span>
Route Security	<span style="background-color: #cc9933; width: 20px; height: 10px;"></span>	<span style="background-color: #f0e68c; width: 20px; height: 10px;"></span>
Route Efficiency	<span style="background-color: #0056b3; width: 20px; height: 10px;"></span>	<span style="background-color: #6699cc; width: 20px; height: 10px;"></span>
Walking and Cycling	<span style="background-color: #808080; width: 20px; height: 10px;"></span>	<span style="background-color: #cccccc; width: 20px; height: 10px;"></span>
Environmental	<span style="background-color: #90ee90; width: 20px; height: 10px;"></span>	<span style="background-color: #c0ffc0; width: 20px; height: 10px;"></span>
Congestion Relief/TDM	<span style="background-color: #00b09b; width: 20px; height: 10px;"></span>	<span style="background-color: #90e0e0; width: 20px; height: 10px;"></span>
Passing Lanes (PL)	<span style="background-color: #800080; width: 20px; height: 10px;"></span>	<span style="background-color: #e06699; width: 20px; height: 10px;"></span>



<span style="background-color: #d9ead3; width: 20px; height: 10px;"></span>	Transit Region
<span style="border-bottom: 1px solid black; width: 20px;"></span>	Territorial Authority Boundary
<span style="border-bottom: 2px solid black; width: 20px;"></span>	State Highway
<span style="border-bottom: 1px solid black; width: 20px;"></span>	Other Roads



## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Manawatu/Wanganui's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the Manawatu/Wanganui region include:

- › Road safety
- › Safety and capacity issues south of Levin
- › Industrial and commercial development around Palmerston North Airport, and the proposed closure of Milson Line due to airport extensions
- › Residential development to the east of Palmerston North across the Manawatu River
- › Route security and efficiency to the east, through the Manawatu Gorge
- › Additional river crossings to provide access from Palmerston North
- › The need to provide for a heavy commercial vehicle route
- › Assist in the maintenance of a Lahar Warning system on Mt Ruapehu.

## How we plan to address these key issues

While there is a significant emphasis for Transit in the Manawatu/Wanganui region on maintaining the existing state highway network, there are a number of activities prioritised to improve road safety as well as route security and efficiency in the region. A further priority is managing the connections between state highways and local roads, as well as access to state highways from adjacent land, to support the medium to long distance travel function of key arterial roads.

Two safety improvements are also proposed on SH1: the Ohingaiti–Makohine Realignment south of Taihape and the Foxton South Curves. The Manawatu Hill Realignment and the Papatawa Realignment, both near Dannevirke, are on rural sections of SH2 that have safety issues.

Large improvement projects (with construction costs of more than \$3.4M) have been indicated for 10 years while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Manawatu/Wanganui projects in the 10-year State Highway Forecast are shown on the map.

## Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of small and medium sized activities to improve the safety and efficiency of sections of the state highway and to improve safety at intersections, to progress in the next three years. Activities include intersection improvements, realignments and seal widening. Implementation of works identified from previous crash reduction studies will be undertaken in the Manawatu/Rangitikei District and traffic signals will be installed on the Grey Street/Princess Street intersection in Palmerston North. Further work on the management or removal of roadside hazards will continue.

## Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. In Manawatu/Wanganui a number of projects have been identified to provide passing opportunities to progress in the next three years, including three passing lanes or passing lane extensions on SH1, and two passing lanes on SH3. The passing lanes on Calico Line, North and South (near the Marton turnoff) on SH1 will also be completed.

## Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities Transit propose the construction of facilities on SH2 near Dannevirke, on SH4 near National Park and on SH1 near Taihape.

## Walking and Cycling

The Bulls Bridge Cycleway Improvement will be progressed during the next three years.

## Strategic Studies

We are proposing to undertake a number of strategic studies for the Manawatu/Wanganui region, including studies of Desert Road Summit to Levin and south of Levin to improve our long-term planning and assist good decision-making.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

Maintenance and operations activities make up a large proportion of the forecast expenditure in the Manawatu/Wanganui region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Resurface 61 kilometres of highway
- › Continue to provide high-quality skid-resistant road surfaces
- › Widen the carriageway to target seal widths as part of maintenance activities, when appropriate and affordable
- › Upgrade the Levin traffic lights on SH1 for pedestrians
- › Enhance Transit's management of slips and unstable areas to reduce risks to safety and route security
- › Continue to work with Horizon's (Manawatu/Wanganui Regional Council) Lifelines Transportation Group to refine emergency management procedures.

# Manawatu/Wanganui State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.





SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
<b>Large Projects (Committed)</b>						
1	Hihitahi Bluffs Realignment	Safety	1.52			
<b>Large Projects (Priority Order)</b>						
1	Ohingaiti-Makohine Realignment <sup>ⓐ</sup>	Safety	\$ \$			
2	Papatawa Realignment <sup>ⓐ</sup>	Safety	\$ \$			
<b>Projects inside 6-10 year Forecast</b>						
1	Foxton South Curves <sup>ⓐ</sup>	Safety	\$			
2	Manawatu Hill Realignment <sup>ⓐ</sup>	Safety	\$ \$			
<b>Small and Medium Projects (Priority Order)</b>						
57	Tennent/Old West Road Intersection	Route Efficiency	0.11			
3	Grey Princess Signals – Palmerston North	Congestion Relief/TDM	\$			
4	Manunui Intersection	Safety	\$			
	Crash Reduction Study Treatments;SH1	Safety	\$			
4	North of Upokongaro Realignment	Safety	\$			
3	Awahuri Intersection	Safety	\$			
57	Makerua Intersection SH56/57	Safety	\$			
54	Newbury Intersection Right Turn Bay	Safety	\$			
3	Stewart Road Intersection and Seal Widening <sup>ⓐ</sup>	Safety	\$			
56	Opiki T Junction <sup>ⓐ</sup>	Safety	\$			
57	Queens Street Intersection <sup>ⓐ</sup>	Safety	\$			
1	Makomako Intersection (Levin South) <sup>ⓐ</sup>	Safety	\$			

<sup>ⓐ</sup> denotes regionally distributed funds



# Manawatu/Wanganui State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M) \$ < 5M    \$\$\$ 20-100M \$\$\$ 5-20M    \$\$\$\$ 100+M	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
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**Passing Lanes (Priority Order)**

I	Calico Line North PL	Safety	0.05			
I	Calico Line South PL	Safety	0.08			
I	Vinegar Hill PL Extension	Safety	\$			
I	Waitarere Road North PL	Safety	\$			
I	Kaimatarau Road South PL	Safety	\$			
3	O'Donnell – Skermanns PL	Safety	\$			
3	Duddings Lake North PL <sup>®</sup>	Safety	\$			

**Stock Effluent Disposal Facility**

	Dannevirke	Environmental	\$			
	National Park	Environmental	\$			
	Taihape	Environmental	\$			

**Walking & Cycling**

I	Bulls Bridge Cycleway	Access	\$			
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**Strategic Studies**

	Desert Road to Levin					
	South of Levin					

<sup>®</sup> denotes regionally distributed funds



## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Wellington's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the Wellington region include:

- › Road safety
- › Severe congestion, particularly at peak times, on the main routes into and out of Wellington City. Key "hot points" include Paekakariki to Pukerua Bay, SH1 Ngauranga interchange, SH2 Dowse to Ngauranga and around the Terrace and Mt Victoria Tunnels
- › Route security and efficiency to the north of Wellington, both on SH1 and SH2
- › Access to the Airport and Wellington's regional hospital in Newtown
- › The need for stronger connections between Lower Hutt and Porirua.

## How we plan to address these key issues

Improvements are needed to reduce congestion and address safety issues along SH1 between Ngauranga and Peka Peka, just north of Waikanae. Construction of MacKays Crossing Overbridge is well underway and on track for completion at the end of 2006. Extension of the wire rope central median barrier along Centennial Highway, between Paekakariki and Pukerua Bay, has been approved and physical works have started.

Greater Wellington Regional Council, following extensive public consultation, has adopted a Western Corridor Plan for inclusion in the draft Regional Land Transport Strategy. The plan includes travel demand measures, improvements to "park and ride" and bus-rail connections and plans to increase passenger rail transport.

The plan can be geographically split into two areas, these being to the north and south of MacKays Crossing. In the north, the Kapiti Western Link Road (yet to be confirmed) is a joint project with Kapiti Coast District Council to construct a major arterial parallel to SH1 between Peka Peka Road north of Waikanae, and Poplar Avenue at Raumati. This is included in the 10-year State Highway Forecast. This will relieve congestion on both the state highway and local roads and provide a second crossing of the Waikanae River.

Transit continues to work with Kapiti Coast District Council on the final form of the Kapiti Western Link Road. The need for grade separation of the connections to SH1 will be investigated as part of the design.

The construction of Transmission Gully Motorway has been included in the corridor plan, but is subject to a funding plan being finalised by the region. Funding for investigation and preliminary design has been included in the 10-year forecast. Initial work on this will begin immediately but full development will be contingent on a funding plan being approved.

Although investigation into a new road linking Grenada on SH1 with the Hutt Valley is included in the Western Corridor Plan, it is not included in the current 10-year State Highway Forecast because the status of the road is yet to be determined.

The Hutt Corridor is often congested, particularly south of Upper Hutt. Planning is well advanced for the Dowse to Petone upgrade, forecast for a construction start in 2006/07. Proposed improvements include an overbridge at the Korokoro intersection (connecting the Western Hills with Hutt Road) and an interchange at the Dowse Drive intersection (connecting Dowse Drive and Hutt Road via a roundabout raised over the highway, as well as connections to the state highway). These improvements also include altering the Petone "Park and Ride" facility and minor safety improvements to the highway between the existing intersections. Investigation of options to upgrade the Melling Intersection is included in the 10-year forecast.

Other large projects forecast in the 10-year period include the Rimutaka Corner Easing project to straighten some tight curves at "Muldoon's Corner", about 500 metres south of the Rimutaka summit. Here the current alignment requires some heavy vehicles to regularly cross the centre line. Grade separation of the SH2 to SH58 intersection at Manor Park is also included. Previously identified improvements required at the Basin Reserve have been retained in the forecast but are subject to confirmation by the Ngauranga to Airport Study.

Large improvement projects, with construction costs of more than \$3.4M have been indicated for 10 years while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Wellington projects in the 10-year forecast are shown on the map.

## Road Safety

Transit has identified one safety improvement project on SH1 for progress in the next three years. This is at Old Hautere Road south of Otaki. The first stage of the Advanced Traffic Management System (ATMS) installed in Ngauranga Gorge has been very effective in smoothing traffic flows and ensuring a faster response to incidents. Transit proposes to investigate the extension of the system incrementally to other high traffic volume sections of SH1 from Ngauranga to the Terrace Tunnel and at SH2 from Petone to Ngauranga.

In addition, variable message signs are to be located at various sites within the Wellington region to assist with safety by providing information to road users, particularly for more extreme events causing road closures. Further work on the management or removal of roadside hazards will continue.

## Secure and Efficient Transport Corridors

Two new roundabouts are proposed for SH2 in Carterton; at the Pembroke Street intersection and the Park Road/Belvedere Road intersection. A larger Otaki roundabout is proposed at the intersection of SH1 and Rahui/Mill Roads. The Rugby St/Adelaide Rd intersection at the Basin Reserve is to be improved to assist in reducing congestion.

## Heavy Vehicle Weigh Station

With the completion of the Mana upgrade there is no southbound weighing facility. A replacement is required to ensure that the Police can manage their safety and compliance responsibilities. Sites at Plimmerton and further north on the Kapiti Coast have been identified as potential sites. The SH1 Waikanae weigh station project is forecast to be completed within the next five years.

## Passing Lanes

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. In Wellington a number of passing lane projects have been identified for progress in the next three years, subject to \$R funding, including SH1 between Otaki and Waikanae, and SH2 in the Wairarapa, with north and southbound lanes between Featherston and Greytown and between Masterton and Carterton, and Judgeford on SH58.

## Walking and Cycling

The extension of the SH2 cycleway to the Petone interchange from its current position has been identified for improvements in the next three years.

## Strategic Studies

A number of strategic studies for the Wellington region are proposed including SH58, (as part of the investigation of the Transmission Gully Motorway), the SH2 Petone to Hayward Safety Review, the Wellington Cycle Strategy Audit and the SH2 Wairarapa (Mt Bruce to Featherston) Study. The Ngauranga to Airport Study, a joint study between Transit, Greater Wellington Regional Council, and Wellington City Council has started with the first stage of consultation having been undertaken.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

































Maintenance and operations activities make up the majority of the forecast expenditure in the Wellington region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Resurface 35km of highway, including 16km of low noise surfacing
- › Apply high skid resistant surfacing on approaches to high speed intersections
- › Continue to maintain and improve the SH58 Pauatahanui inlet seawall
- › Continue with flood mitigation works on SH1 at Paekakariki
- › Work with local authorities to optimise traffic operations on both local arterials and state highways
- › Improve coordination with Police and Emergency Services in the management of incidents that affect the operation of the network
- › Continue to work with Civil Defence and Emergency Management to refine emergency response plans in and around Wellington
- › Monitor traffic and levels of congestion
- › Continue with a programme of improvements to tunnels to more closely meet international standards.

## Wellington State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M) \$ < 5M    \$\$\$ 20-100M \$\$ 5-20M    \$\$\$\$ 100+M	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
<b>Large Projects (Committed)</b>						
1	Mackays Crossing Overbridge	Congestion Relief/TDM	3.03			
1	Transmission Gully Early Planting	Environmental	0.68			
1	Inner City Bypass	Congestion Relief/TDM	13.73			
2	Waiohine Bridge	Route Security	1.99			
1	Centennial Highway Median Barrier	Safety	13.00			
<b>Large Projects (Priority Order)</b>						
2	Dowse to Petone Interchange	Congestion Relief/TDM	\$\$\$			
1	Basin Reserve Improvements ©	Congestion Relief/TDM	\$\$\$			
	Transmission Gully	Congestion Relief/TDM	\$\$\$\$			
	Kapiti Western Link Road - Stage 1	Congestion Relief/TDM	\$\$\$			
	Kapiti Western Link Road - Stage 3 ®	Congestion Relief/TDM	\$			
	Kapiti Western Link Road - Stage 2 ®	Congestion Relief/TDM	\$			
2	Melling Interchange ©	Congestion Relief/TDM	\$\$\$			
2	Rimutaka Corner Easing (Muldoon's) ®	Safety	\$			
2	SH2/58 Grade Separation ©	Safety	\$\$\$			

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

® denotes regionally distributed funds

© denotes crown funding

# Wellington State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07		6-10 Year Forecast
				\$ < 5M	2-5 Year Plan	
			\$ \$ < 5M			
			\$ \$ 5-20M			
			\$ \$ \$ 20-100M			
			\$ \$ \$ \$ 100+M			
<b>Small and Medium Projects (Priority Order)</b>						
1	Waikanae Weigh Station	Route Security	\$			
2	Carterton Roundabouts – Pembroke Street Intersection	Safety	\$			
2	Carterton Roundabouts – Park Road/Belvedere Road	Safety	\$			
1	Rugby St/Adelaide Rd Intersection	Safety	\$			
1	Ngauranga to Terrace Tunnel ATMS	Congestion Relief/TDM	\$			
1	Otaki Roundabout	Route Efficiency	\$			
1	Old Hautere Road Safety Improvements ②	Safety	\$			
2	Petone to Ngauranga ATMS ②	Congestion Relief/TDM	\$			
	Wellington Region Variable Message Signs ②	Congestion Relief/TDM	\$			
1	Paekakariki Improvements	Safety	\$			
1	Pukerua Bay Improvements	Safety	\$			

② denotes regionally distributed funds

## Wellington State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
<b>Passing Lanes (Priority Order)</b>						
1	Otaki to Waikanae Sth Bd PL	Safety	\$			
2	Featherston to Greytown Nth Bd PL	Safety	\$			
2	Greytown to Featherston Sth Bd PL	Safety	\$			
2	Carterton to Masterton Nth Bd PL	Safety	\$			
2	Masterton to Carterton Sth Bd PL	Safety	\$			
58	Judgeford PL <sup>Ⓞ</sup>	Safety	\$			
<b>Walking &amp; Cycling</b>						
2	Petone – Horokiwi Cycling Facility	Access	\$			
	Teihana Road Pedestrian Facilities	Access	\$			
<b>Strategic Studies</b>						
	SH1 Ngauranga to Airport (committed)					
	Wellington State Highway Strategy					
	SH2 Petone to Hayward Safety Review					
	Wellington Cycle Strategy Audit					

<sup>Ⓞ</sup> denotes regionally distributed funds



## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Nelson/Marlborough/Tasman Regional Land Transport Strategies, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the Nelson/Marlborough/Tasman region include:

- › Road safety
- › Delays at some key intersections during peak periods
- › Poor air quality in some parts of Nelson
- › Traffic growth within and beyond Blenheim.  
Traffic growth is continuing on arterial roads in the Blenheim/Wairau Plains environs. Ferry traffic is a relatively unique issue with "tidal" flows throughout the day
- › Route security and efficiency to the east, including the Awatere Bridge, and south of Nelson, including SH6 Hope Saddle
- › Forestry traffic: Marlborough is anticipating a significant increase in forestry to around one million tonnes per year, of which two-thirds is expected to be exported through Port Shakespeare at Picton. Nelson and Tasman are similarly expecting a significant growth to two million tonnes, much of which will be exported through the Port of Nelson
- › Tourist traffic: particularly to Nelson Lakes National Park, Marlborough Sounds, Abel Tasman Park and Kahurangi National Park.

## How we plan to address these key issues

While there is a significant emphasis for Transit in Marlborough, Nelson and Tasman on maintaining the existing state highway network, there are a number of activities in the 10-year State Highway Forecast to improve road safety as well as route security and efficiency in the Nelson/Marlborough/Tasman region. In addition, a strategic study is in progress to determine the future transport needs for the Nelson to Brightwater Corridor. The outcomes of this study will be considered in future forecasts.

A further priority is managing the connections between state highways and local roads, as well as access to state highways from adjacent land, to support the medium to long distance travel function of key arterial roads.

Substantial improvements have been made to the state highway network recently, especially in Nelson City, the Tasman District and Blenheim. State highways in Marlborough, Nelson and Tasman are now generally of a high standard. To ensure this standard is maintained, the Awatere Bridge Replacement project on SH1, south of Blenheim, was funded for construction in 2005/2006 and is underway. Additionally, the SH6 Whangamoia South and SH60 Ruby Bay projects are included for construction, subject to confirmation of project scope.

Large improvement projects, with construction costs of more than \$3.4M have been indicated for 10 years while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Nelson/Marlborough/Tasman projects in the 10-year forecast are shown on the map.

## Road Safety

Transit has identified a number of small and medium sized projects to improve the safety and efficiency of sections of state highway and to improve safety at intersections, for progress in the next three years. Projects include: SH60 Flush Median and Research Orchard Corner Realignment in Appleby and SH62 seal widening of Rapaura Road from Jefferies to Wratts, and Wratts to SH1. Further work on the management or removal of roadside hazards will continue.



## Secure and Efficient Transport Corridors

The following intersection improvements are aimed at reducing congestion and contributing to more efficient transport corridors: constructing the Tahunanui traffic signals in Nelson and the McGlashen Avenue intersection in Richmond, both on SH6.

## Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. Two passing lane projects have been identified for progress in the next three years on SH1 at Para and Grovetown, both north of Blenheim.

## Walking and Cycling

Three projects that are part of Nelson City's Atawhai Walking and Cycling project, have been identified for construction on SH6 to the north of Nelson: Bayview Road to Atawhai Drive, Marybank to Tui Glen Road, and Tui Glen Road to Bayview Road.

## Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities Transit proposes to progress a facility at Murchison and at one other location on SH6 yet to be determined.

## Strategic Studies

The Nelson to Brightwater Corridor Study is a joint study being carried out by Transit, Nelson City Council and Tasman District Council. The purpose of the study is to develop a long-term transport strategy for the greater Nelson and Richmond areas, including the SH6 corridor from Hira to Brightwater and the SH60 corridor from SH6 to Pea Viner Corner. In early 2005 the first stage of public consultation was undertaken and a strategic transport model was built to assess a range of transportation packages. The second stage of public consultation was completed in November 2005. Feedback was received on four different transportation improvement packages. That feedback is now being used to develop a long-term transportation strategy for the region. Completion of the study is expected in mid 2006 and the outcomes will be considered in future State Highway Forecasts.

Strategic studies for the Tasman region include the Tasman Passing Lane Investigation Study and the Richmond Development and Transportation Study, in partnership with Tasman District Council.

A study of the Blenheim and Wairau Plains is also proposed in conjunction with Marlborough District Council.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

Maintenance and operations activities make up the majority of the forecast expenditure in the Marlborough/Nelson/Tasman region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Resurface 105 kilometres of highway, including 6 kilometres with low noise surfacing
- › Strengthen 7 kilometres of highway
- › Continue to improve the prediction of winter road conditions in order to improve emergency responses to snow and ice, and continue to trial the use of the anti-icer calcium magnesium acetate
- › Continue to manage local roads in Marlborough (under contract to Marlborough District Council).

# Nelson/Marlborough/Tasman State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M

### Large Projects (Committed)

1 Awatere Bridge | 1.84

### Large Projects (Priority Order)

60 Ruby Bay Bypass @ \$\$\$

6 Whangamao South Realignment @ \$\$\$

6 Hope Saddle Realignment @ \$\$\$

### Small and Medium Projects (Priority Order)

60 Research Orchard Corner Realignment \$

6 McGlashen Avenue Intersection \$

62 SH62 Rapaura-Jefferies to Wratts \$

62 SH62 Rapaura-Wratts to SH1 \$

6 Tahunanui Intersection \$

60 SH60 Flush Median @ § \$

### Passing Lanes (Priority Order)









1 Para Nth Bd PL @ \$

1 Grovetown Nth Bd PL \$

@ denotes regionally distributed funds

§ in conjunction with third party contributions outside NLTP funding

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			
			
			
			

# Nelson/Marlborough/Tasman State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			

**Stock Effluent Disposal Facility**

6	Murchison	Environmental				\$
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**Walking & Cycling**

6	Atawhai W/C Project – Bayview Rd to Atawhai Dr	Access				\$
6	Atawhai W/C Project – Marybank to Tui Glen Rd	Access				\$
6	Atawhai W/C Project – Tui Glen Rd to Bayview Rd	Access				\$

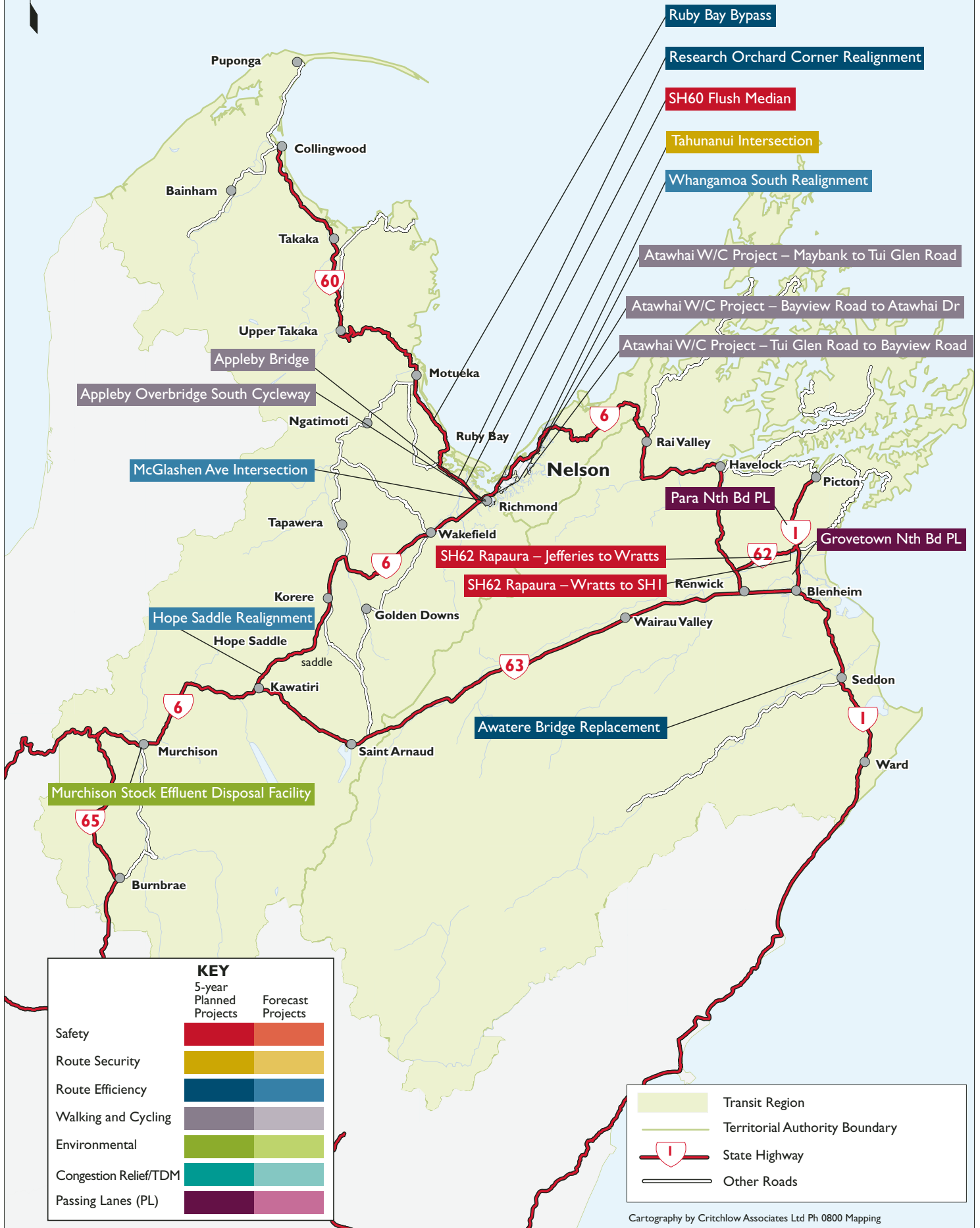
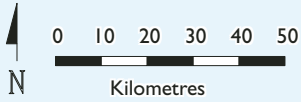
**Strategic Studies**

- North Nelson to Brightwater (committed)
- Richmond Development and Transportation Study (joint study with Tasman District)
- Blenheim/Wairau Plains Study

# Fig NM

## NELSON/MARLBOROUGH/TASMAN REGIONS

State Highway Network at 01 July 2006





## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Canterbury's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the Canterbury region include:

- › Road safety
- › Congestion: traffic on the main arterial routes within Christchurch City is increasing by 4 percent each year. Journeys during peak periods are regularly taking 15-20 minutes longer than during off-peak periods
- › Ongoing residential development on the outskirts of Christchurch. The Greater Christchurch Urban Development Strategy has implications for transport and for the social, economic and cultural wellbeing of the Christchurch community, including integrating other forms of transport with the road network
- › Ongoing commercial development to the west of Christchurch, around SH1 and SH73
- › Dairy activity in south Canterbury centered on the Clandeboye Dairy Factory
- › Access to the Ports of Lyttleton and Timaru
- › Continuing tourism development around Kaikoura, south Canterbury and the Mackenzie Country

- › Provision of passing opportunities on SH1, north of Kaikoura and south of Ashburton
- › Significant heavy vehicle growth on SH1
- › High car ownership and use in Christchurch and Canterbury.

## How we plan to address these key issues

While there is a significant emphasis for Transit in Canterbury on maintaining the existing state highway network, there are a number of activities prioritised in the 10-year State Highway Forecast to reduce congestion, improve road safety, and improve the route security and efficiency of routes into and out of Canterbury.

A further priority is managing the connections between state highways and local roads, as well as access to state highways from adjacent land, to support the strategic long distance travel function of key arterial roads.

Large improvement projects (with construction costs of more than \$3.4M) have been indicated for 10 years while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Canterbury projects in the 10-year forecast are shown on the map.

## Travel Demand Management

The highest priority for the Canterbury region is the implementation of measures to support a Travel Demand Strategy outlined in the Regional Land Transport Strategy. Travel Demand Management (TDM) is a combination of activities that together seek to reduce the rate of traffic growth by measures such as encouraging the use of alternative modes.

Transit intends to implement TDM through infrastructure improvements for public transport on state highways that coincide with core public transport routes, such as Main North Rd. Transit will continue to work with Environment Canterbury and Christchurch City Council to further the development of the Christchurch Travel Demand Management Strategy.

## Access to the North

Further project investigation and scoping will be undertaken on improving access on northern approaches to Christchurch. Specific activities include a four-lane arterial to link the Northern Motorway with QE2 Drive, QE2 four-laning and the Western Bypass of Belfast, (Christchurch Northern Links Study).

## Access and Mobility around Christchurch

The duplication and extension of the Christchurch Southern Motorway (SH73) south of the city and the four-laning of the Western Corridor (SH1) between Sawyers Arms and Waterloo Road will ensure efficient travel along these key routes.

## Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of activities to improve the safety and efficiency of sections of state highway, including intersections. Proposed improvements are aimed at reducing congestion and contributing towards more efficient transport corridors. Further work on the management or removal of roadside hazards will continue.

## Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and crashes. Transit plans to progress further passing lanes on SH1 between north of Kaikoura and south of Ashburton.

## Walking and Cycling

Walking and cycling activities identified for Canterbury include Christchurch City Cycle Lane Safety Improvements and investigations into options for improving cycle safety at “pinch points” around Canterbury.

## Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities we propose to progress the Pareora Stock Effluent Disposal Facility, south of Timaru, and the Kaikoura Stock Effluent Disposal Facility, both on SH1.

## Strategic Studies

We are proposing to undertake a number of strategic studies for the Canterbury region, to improve our long-term planning and assist good decision-making.

The lack of alternative access to and through the West Coast means that SH73 is of great strategic importance to the West Coast economy. A strategic study looking at route security is to be undertaken. A strategic study for Mingha Bluff to Rough Creek on SH73 will also be undertaken to identify state highway improvements at reasonable cost.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

Maintenance activities make up the majority of the forecast expenditure in the Canterbury. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Undertake 32km of resurfacing, including 1km with low noise surfacing
- › Strengthen 5km of state highway
- › Improve the availability of road condition information to road users at critical points on the network using electronic variable message signs, as already in place on SH7 (Lewis Pass and Rahu Saddle)
- › Introduce thermal mapping of the inland network to better predict where ice will occur
- › Introduce more road weather stations to improve road condition predictions and maintenance team responses to ice and snow, and continue to trial the use of the de-icer calcium magnesium acetate
- › Continue risk analysis of rock falls and river erosion and prioritise work accordingly
- › Strengthen a number of bridges on the network to reduce their vulnerability in the event of a severe earthquake
- › Continue to maintain and improve the coastal defences of SH1, north and south of Kaikoura
- › Work with the Department of Conservation to ensure that maintenance work within New Zealand's national parks represents world best practice
- › Continue with a programme of improvements to tunnels to more closely meet international standards.

## Canterbury State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

Committed Investigation	Committed Design	Committed Construction
Investigation	Design	Construction

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$\$ 20-100M \$\$\$\$ 100+M			
	<b>Large Projects (Committed)</b>					
74	Main North Road 4L Stage 2	Route Efficiency	1.5			
	<b>Large Projects (Priority Order)</b>					
73	Christchurch TDM Implementation	Congestion Relief/TDM	\$			
I	Christchurch Southern Motorway Extension @ \$	Route Efficiency	\$\$\$			
I	Christchurch Northern Arterial Rural @	Route Efficiency	\$\$\$			
I	Memorial Ave Intersection @	Congestion Relief/TDM	\$\$			
I	Memorial Ave to Yaldhurst Rd 4L	Route Efficiency	\$			
I	Sawyers Arms to Memorial Ave 4L	Route Efficiency	\$			







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

@ denotes regionally distributed funds  
 \$ in conjunction with third party contributions outside NLTP funding



## Canterbury State Highway Plan and Forecast for 2006/07 to 2015/16

### Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
				\$ < 5M	\$ 5-20M	\$ 20-100M
<b>Projects inside 6-10 year Forecast</b>						
I	Yaldhurst Rd to Waterloo Rd 4L	Route Efficiency	\$			
I	Okarahia North Realignment ®	Safety	\$			
<b>Small and Medium Projects (Priority Order)</b>						
74	Marshland Rd / QEII Dr- Intersection Upgrade	Congestion Relief/TDM	\$			
73	Yaldhurst Rd/Curletts Rd Intersection	Route Efficiency	\$			
I	East-West Street Int (North)	Safety	\$			
I	Halswell JR/MSR Intersection Signals TS	Route Efficiency	\$			
73	Pound Road Intersection ®	Route Efficiency	\$			
I	Rolleston Intersection Improvements ® §	Route Efficiency	\$			
1/8	SH1 & SH8 Intersection Improvements I/S ®	Route Efficiency	\$			
8	Burkes Pass West Curve Realignment ®	Safety	\$			
75	Dunbars Road Intersection ®	Route Efficiency	\$			

® denotes regionally distributed funds

§ in conjunction with third party contributions outside NLTP funding

## Canterbury State Highway Plan and Forecast for 2006/07 to 2015/16

### Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			

### Passing Lanes (Priority Order)

I	Hinds Passing Lane PL	Safety	\$			
I	Limestone Creek Slow Vehicle Bay	Safety	\$			
I	St Andrews North PL ®	Safety	\$			
I	Ealing PL ®	Safety	\$			
I	Orari North PL ®	Safety	\$			

### Stock Effluent Disposal Facility

I	Pareora	Environmental	\$			
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### Walking & Cycling

	Cycle Pinch Point options investigations	Access	\$			
	Christchurch City Cycle Lanes	Access	\$			

### Strategic Studies

- Christchurch Urban Development Strategy (committed)
- SH1 Christchurch Northern Links
- SH1 Woodend Bypass
- SH73 Route Security

® denotes regionally distributed funds



## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as the West Coast's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the West Coast region include:

- › Road safety: a key concern is the potential conflict between heavy and light vehicle traffic, particularly on single-lane bridges on SH6
- › Ensuring secure and efficient transport corridors to the east via SH73 and Arthur's Pass, and via SH7 and Lewis Pass, to the north via SH6 and Hope Saddle, and to the south via SH6 and the Haast Pass
- › Increasing traffic due to the coal mining, dairy and tourist industries
- › Lack of passing opportunities.

### How we plan to address these key issues

State highway 6 forms the essential spine for land transport on the West Coast. Significant improvements to SH73 over recent years have greatly improved the security of this strategic link. The latest improvement to be completed is the construction of a new rail bridge at the Otira Underpass, which has allowed the vertical clearance to be increased for road traffic. Vehicles of all legal dimensions can now use this route to access the West Coast.

Traffic volumes on the West Coast are generally quite low and the state highway network is maintained to a high standard for low-volume highways. In maintaining this standard, Transit acknowledges the large tourist content of the traffic in this region. While the emphasis for Transit in the West Coast region is on maintaining the existing state highway network, there are a number of activities prioritised in the 10-year State Highway Forecast to improve road safety as well as route security and efficiency in the West Coast region.

A further priority is managing the connections between state highways and local roads, as well as access to state highways from adjacent land, to support the strategic long distance travel function of key arterial roads.

The Arahura River Bridge is in urgent need of replacement given its age and condition. There would be significant negative impacts on the West Coast network if the bridge was to become unserviceable. We are working closely with ONTRACK with a view to constructing a new bridge within the next 5 years.

The lack of alternative access to and through the West Coast means that both SH73 and SH6 are of great strategic importance to the West Coast economy. The scoping study on the Gates of Haast Realignment will be completed on SH6 and a strategic study for Mingha Bluff to Rough Creek on SH73 will be undertaken to identify state highway improvements at reasonable cost.

Large improvement projects (with construction costs of more than \$3.4M) have been indicated for 10 years while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of West Coast projects in the 10-year State Highway Forecast are shown on the map.

### Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of small to medium activities to improve the safety and efficiency of sections of state highway, including the Goat Creek Bridge Replacement on SH73.

In addition, traffic signals will be installed on SH6 through the Buller Gorge, to improve the safety of passing vehicles in some of the narrower locations.

### Stock Effluent Disposal Facilities

In accordance with the plan agreed with local authorities the stock effluent disposal facility on SH6 in Hokitika has been completed and a new stock effluent disposal facility is proposed for SH7 at either Reefton or Springs Junction, depending on stock movements. A facility at Jacksons on SH73 is also under development.

### Walking and Cycling

We are proposing to undertake the West Coast Cycle Strategy, in association with local authorities, to improve our long term planning and ensure good decisions that lead to safer and more efficient transport.

### Passing Lanes

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. Transit proposes to develop a strategy to identify possible locations for passing opportunities, using a mix of slow vehicle bays, seal widening and passing lanes.

### Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.









Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

Maintenance activities make up the majority of the forecast expenditure in the West Coast region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:


- › Undertake 91km of resurfacing, including 1km with low noise surfacing
- › Strengthen 8km of highway
- › Improve the availability of road condition information to road users at critical points on the network using electronic variable message signs, as erected on SH7 (at Lewis Pass and Rahu Saddle). Signs for SH73, at Arthur's and Porters Pass, are expected to be commissioned this year
- › Introduce thermal mapping of the inland network to predict where ice may occur
- › Introduce more road weather stations to improve emergency responses to ice and snow on roads, and continue to trial the use of the de-icer calcium magnesium acetate
- › Continue to monitor Waiho River erosion at Franz Josef and take appropriate action to ensure SH6 remains safe and open
- › Continue risk analysis of rock falls and river erosion and prioritise works accordingly, to avoid road closures
- › Strengthen a number of bridges on the network to reduce their vulnerability in the event of a severe earthquake
- › Work with the Department of Conservation to ensure maintenance works within national parks represent best practice
- › Complete the strengthening of the three suspension bridges (Fox, Cook, and Karangarua) on SH6 in south Westland to remove the current weight restriction, which is a significant impediment to heavy goods movement in this area
- › Continue with improvements in traffic management at incidents on the network.

# West Coast State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

			
Committed Investigation	Committed Design	Committed Construction	Committed Construction
			
Investigation	Design	Construction	Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

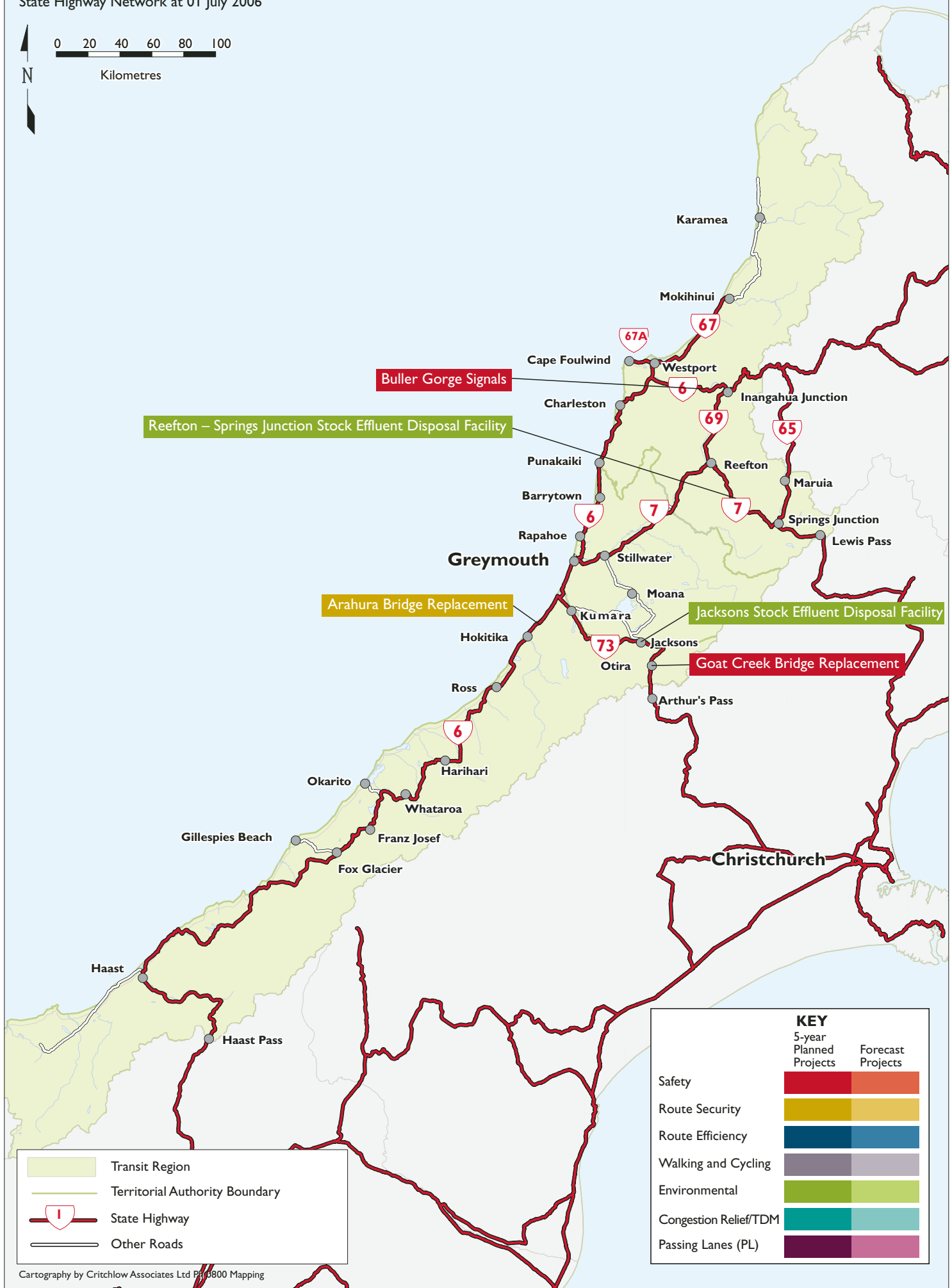
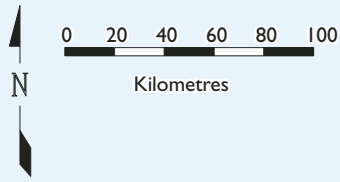
SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
<b>Large Projects (Priority Order)</b>						
6	Aradura Bridge Replacement	Route Security	\$\$			
<b>Small and Medium Projects (Priority Order)</b>						
6	Buller Gorge Signals	Safety	\$			
73	Goat Creek Bridge Replacement ®	Safety	\$			
<b>Stock Effluent Disposal Facility</b>						
73	Jacksons	Environmental	\$			
6	Reefon-Springs Junction	Environmental	\$			
<b>Strategic Studies</b>						
	SH6 Gates of Haast					

® denotes regionally distributed funds

Fig WC

# WEST COAST REGION

State Highway Network at 01 July 2006



Buller Gorge Signals

Reefton – Springs Junction Stock Effluent Disposal Facility

Arahura Bridge Replacement

Jacksons Stock Effluent Disposal Facility

Goat Creek Bridge Replacement

	Transit Region
	Territorial Authority Boundary
	State Highway
	Other Roads

	5-year Planned Projects	Forecast Projects
Safety		
Route Security		
Route Efficiency		
Walking and Cycling		
Environmental		
Congestion Relief/TDM		
Passing Lanes (PL)		



## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Otago's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the Otago region include:

- › Road safety
- › Forestry traffic: over the next 5 to 10 years the region is anticipating a significant increase in forest harvesting to two million tonnes per year, much of which will be exported through Port Chalmers
- › Tourist traffic: increasing particularly around Queenstown and Wanaka
- › Areas of significant and rapid growth in Central Otago and the associated impact on the transport network.

### How we plan to address these key issues

While there is a significant emphasis for Transit in Otago on maintaining the existing state highway network, there are a number of activities prioritised in the State Highway Forecast to improve road safety, route security and route efficiency in the Otago region.

A key priority is managing the connections between state highways and local roads, as well as access to state highways from adjacent land, to support the medium to long distance travel function of key arterial roads.

The highest priority for the Otago region is the investigation into the Caversham Bypass Four-laning project. This is an important project for achieving a safe and efficient corridor between Dunedin and the south, but will only be progressed with a contribution from the regionally distributed funding allocation for Otago. The East Taieri Bypass on SH1 (near Mosgiel) is proposed in the long-term and will improve traffic flow between Dunedin and the south, particularly Dunedin Airport. Further investigation will be undertaken on the East Taieri Bypass to maintain the designation.

A new bridge is proposed at Kawarau Falls on SH6 to the south of Queenstown, to improve both safety and driver comfort in an area that is experiencing rapid population growth. Further projects are likely to be identified for the Queenstown area from the Wakatipu Transportation Study currently underway and some provision has been made for funding their development.

Large improvement projects (with construction costs of more than \$3.4M) have been indicated for 10 years while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Otago projects in the 10-year State Highway Forecast are shown on the map.

### Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of activities to improve the safety and efficiency of sections of state highway, including intersection improvements and realignments, for progress in the next five years subject to regional distribution funding. Safety improvements will be carried out at Lookout Point in Dunedin and One Way Pair Pedestrian safety improvements throughout the Otago University Campus. Intersection improvements will be carried out on Anderson Road on SH84 in Wanaka and safety improvements on Orwell to Coquet Street in Oamaru.

Realignments will be carried out on Tunnel Hill, south of Raes Junction on SH8, and Jefferis Road, south of Palmerston on SH1. The Gentle Annie West realignment, west of Cromwell on SH6, will also be



completed. Bridge improvements are planned for Roaring Meg, west of Cromwell on SH6. Another project on SH6 is to remove rock features that might result in rock falls at Nevis Bluff. Further work on the management or removal of roadside hazards will continue.

### Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. Two passing lanes will be progressed on SH1, at Brydone Memorial, south of Oamaru and at Waihola, south of Dunedin. Progress on these is dependent on regional distribution funding.

### Walking and Cycling

It is planned to widen SH88 in Dunedin at key pinch points between Adderly Terrace to De Lacy Street as well as between Maia Street and Burkes Drive, to make these sections of highway safer for cyclists and pedestrians. This is part of an integrated walking and cycling network being developed in association with Dunedin City Council and Otago Regional Council.

### Strategic Studies

We are undertaking, or propose to undertake, three strategic studies for the Otago region, to improve our long term planning and assist good decision-making. The studies are the Wakatipu Transportation Study (Queenstown), a study of Oamaru and the Waitiki River to Waipahi Study.

### Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term

deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

Maintenance activities make up a large proportion of the forecast expenditure in the Otago region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Undertake some 148km of re-surfacing, including 9km of thin asphaltic surfacing, which, while more expensive, is more durable and quieter
- › Undertake 8.6km of road reconstruction
- › Manage risks from snow and ice on the network by using the anti-icer calcium magnesium acetate and implement more cost effective and safer methods as they become available
- › Follow up the first stage of thermal mapping that has been carried out throughout Otago
- › Continue to develop procedures for managing rock falls and major slips to ensure route security and safety
- › Continue managing wet road crashes by maintaining high skid resistant surfacing
- › Plant on sensitive areas along SH1 at Katiki Beach, Kilmog and the Northern Motorway, to enhance the environment
- › Reduce the likelihood of "heavy metals" draining from the Fairfield Motorway into Kaikoari Stream estuary by constructing "catch pits" (chambers that allow heavy metals to be separated out)
- › Enhance the landscaped areas on the Fairfield Motorway and plant low growth grass on selected road verges
- › Install variable message signs on Lindis Pass (SH8) and the Northern Motorway, to give motorists up to date information on road conditions
- › Develop a strategy, including an in-depth crash analysis, in an effort to reach the Government's 2010 safety targets.













# Otago State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
<b>Large Projects (Committed)</b>						
1	Tumai – Waikouaiti Realignment	Safety	4.6			
<b>Large Projects (Priority Order)</b>						
1	Caversham 4L <sup>Part</sup> <sup>®</sup>	Route Efficiency	\$\$\$		  	
6	Kawarau Falls Bridge Widening <sup>®</sup>	Route Efficiency	\$\$			
1	East Taieri Bypass <sup>®</sup>	Route Efficiency	\$\$			
<b>Small and Medium Projects (Priority Order)</b>						
6	Gentle Annie West Realignment	Safety	0.38			
6	Nevis Bluff	Safety	\$			
8	Tunnel Hill Realignment	Safety	\$			
84	Anderson Road Intersection Improvements	Route Efficiency	\$			
1	Lookout Point Safety Improvements - Stage 1	Safety	\$			
1	Orwell to Coquet Street Safety Improvement	Safety	\$			
6	Roaring Meg Bridge Widening	Safety	\$			
1	Jefferis Road Realignment <sup>®</sup>	Safety	\$			
1	One Way Pair Pedestrian Safety Improvements <sup>®</sup>	Safety	\$			

<sup>®</sup> denotes regionally distributed funds

# Otago State Highway Plan and Forecast for 2006/07 to 2015/16

**Legend: Nature of work**

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Total Cost (\$M)	Land Transport Programme 06/07	2-5 Year Plan	6-10 Year Forecast
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			

**Passing Lanes (Priority Order)**

- I Brydone Memorial PL ® \$
- I Waihola Nth Bd PL ® \$

**Walking & Cycling**

- 88 Adderly Tce to De Lacy St Cycling Improvement \$
- 88 Maia to Burkes Drive Cycling Improvement \$

**Strategic Studies**

- Wakatipu Transport Study (committed)
- Oamaru Study
- Waitiki River to Waipahi Study
- Otago Regional Walking and Cycling Strategy

® denotes regionally distributed funds



## KEY TRANSPORT ISSUES

Transit, along with local and central government are working together to achieve a sustainable land transport system in new ways.

Transit will work closely with regional and district councils to ensure that any substantial upgrading in the next 10 to 20 years is properly considered and planned, in order to relieve congestion and support regional growth strategies. This requires agreement on amendments to road and public transport plans and shared funding responsibilities for both local and national infrastructure and services.

Planning activities such as Southland's Regional Land Transport Strategy, Long-Term Council Community Plans, and Transit's State Highway Forecast all help in this process.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the Southland region include:

- › Road safety
- › Forestry traffic
- › Dairying traffic: the increase in the number of dairy farms is seeing increasing heavy vehicle movements, particularly around the processing plant at Edendale
- › Tourist traffic: particularly increases on the southern scenic route and to Fiordland National Park and between Queenstown and Milford Sound (SH94)
- › Lack of passing opportunities, particularly on SH1 between Edendale and Dacre.

### How we plan to address these key issues

Most state highways in Southland carry relatively low traffic volumes and few improvements are currently required apart from minor safety improvements, improvements to Homer Tunnel on SH94, and a realignment of SH1 at Edendale. Southland's economic growth and conversion of pasture farming activity to dairying is actively monitored to ensure that the current high levels of service on Southland highways are maintained.

While the emphasis for Transit in Southland is on maintaining the existing state highway network, there are a number of activities prioritised in the State Highway Forecast to improve road safety as well as route security and route efficiency.

A key priority is managing the connections between state highways and local roads, as well as access to state highways from adjacent land, to support the medium to long distance travel function of key arterial roads.

There is a continuing need for active management of SH94 between Te Anau and Milford Sound to provide an appropriate level of avalanche protection and traffic management. Transit is continuing investigations into replacing the eastern portal to the Homer Tunnel that was damaged some years ago and needs to be replaced and possibly extended. This tunnel provides the only road access to the key tourist destination of Milford Sound.

In addition, the Edendale Realignment is proposed to improve the safety of that section of SH1.

Large improvement projects (with construction costs of more than \$3.4M) have been indicated for 10 years while projects with construction costs of less than \$3.4M are proposed over the next three years and are shown in the table. The locations of Southland projects in the 10-year State Highway Forecast are shown on the map.

### Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of activities to improve the safety and efficiency of sections of state highway in Southland, including realignments, bridge widening and intersection improvements, for progress in the next five years. A pullover or stopping area with a kiosk will be provided on SH94 near Te Anau, to make road condition information available to motorists. Further work on the management or removal of roadside hazards will continue.

## Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities Transit is proposing a new stock effluent disposal facility on SH1, between Gore and Mataura. A new facility is also planned on SH6 near Lumsden.

## Strategic Studies

We are proposing to undertake three strategic studies for the Southland region, to improve our long term planning and assist good decision-making. These are studies of SH94/95 The Key to Milford (Te Anau), Invercargill to Winton and Lorneville to Wallacetown.

## Maintenance and Operations

The safe operation of the state highway network is a key function for Transit. Processes are in place to manage traffic efficiently, provide consistent and reliable information for road users, undertake maintenance work on the highway in the safest and least disruptive way, monitor locations where crashes occur, and, where appropriate, take corrective action.

The state highway network is a \$15 billion transport infrastructure asset that demands sophisticated and effective management. Transit has systems in place to do this, ranging from infrastructure and traffic databases to natural features inventories, long-term deterioration modelling tools, and annual condition data collection supported by advanced contract delivery methods and regular performance reporting.

Further, improvements to the way traffic is managed at incidents and in congested urban areas are being investigated and implemented.

Maintenance activities make up the majority of the forecast expenditure in the Southland region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:



- › Undertake 74km of resurfacing, including 7km of thin asphaltic surfacing, which, although more expensive, is more durable and quieter
- › Undertake 10km of road pavement reconstruction
- › Continue to install the latest hazard management systems at Homer Tunnel on SH94. The current avalanche hazard management system is recognised as being world-class. We intend to ensure that the programme remains adequately funded and the latest techniques are used to maximise access to Milford Sound and minimise risks to road users
- › Maintaining high skid resistance surfacing to help prevent wet road crashes
- › Develop a strategy, including in-depth crash analysis, in an effort to meet the Government's 2010 safety targets
- › Continue with improvements in traffic management at incidents on the network.

# Southland State Highway Plan and Forecast for 2006/07 to 2015/16

## Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

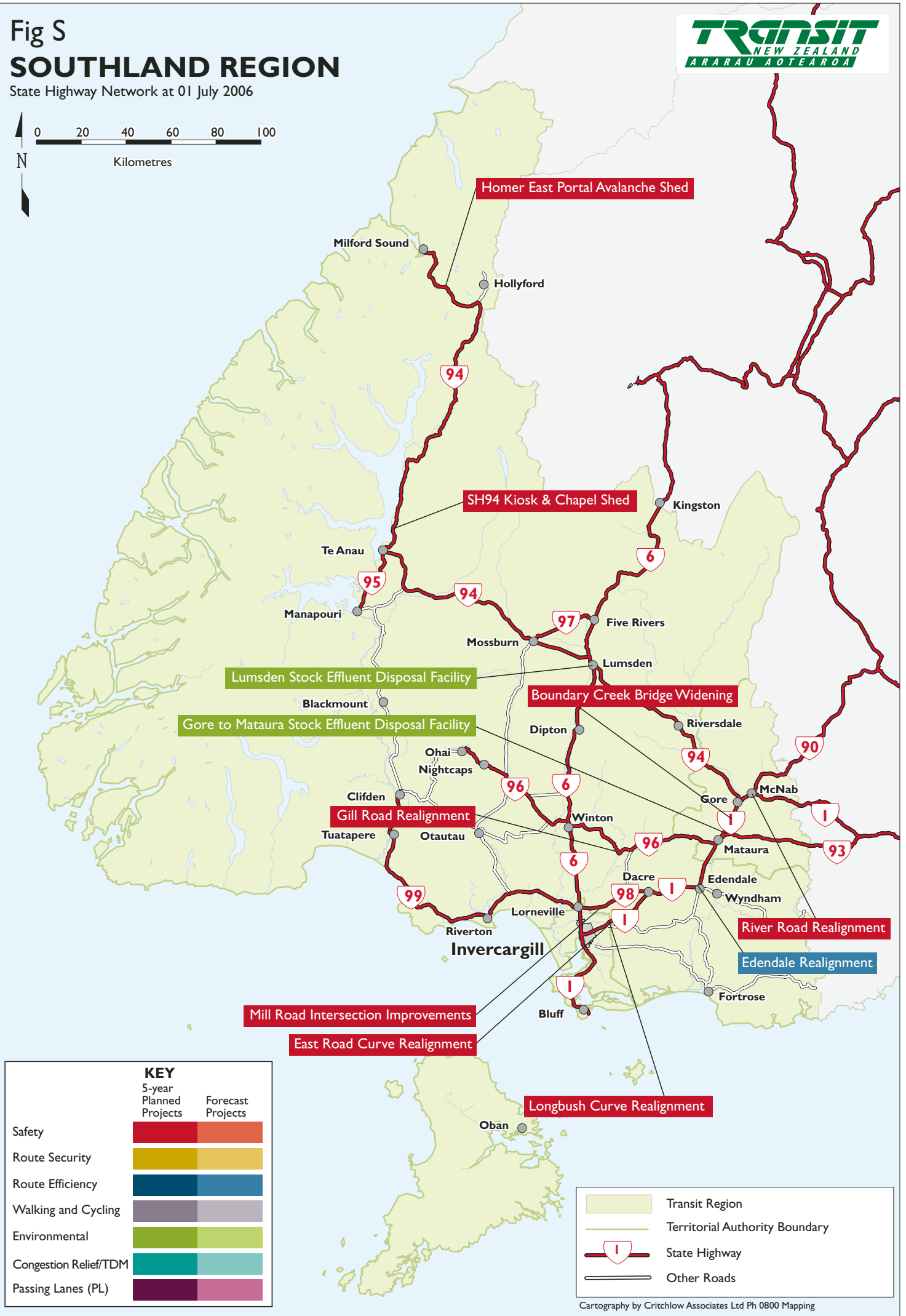
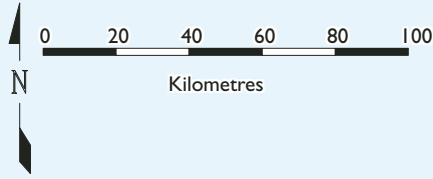
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			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
<b>Large Projects (Priority Order)</b>						
94	Homer East Portal Avalanche Shed (SI)	Safety	\$\$\$			
<b>Projects inside 6-10 year Forecast</b>						
I	Edendale Realignment ⑥	Route Efficiency	\$			
<b>Small and Medium Projects (Priority Order)</b>						
93	River Road Realignment	Safety	0.45			
94	SH94 Kiosk and Chapel Shed	Safety	\$			
I	Longbush Curve Realignment	Safety	\$			
96	Gill Road Realignment	Safety	\$			
I	Boundary Creek Bridge Widening	Safety	\$			
I	East Road Curve Realignment	Safety	\$			
98	Mill Rd Intersection Improvements ⑥	Safety	\$			
<b>Stock Effluent Disposal Facility</b>						
I	Gore to Mataura	Environmental	\$			
6	Lumsden	Environmental	\$			
<b>Strategic Studies</b>						
	SH94/95 The Key to Milford (Te-Anau)					
	Invercargill to Winton & Lorneville to Wallacetown					

⑥ denotes regionally distributed funds

Fig S

# SOUTHLAND REGION

State Highway Network at 01 July 2006



	5-year Planned Projects	Forecast Projects
Safety	[Red Box]	[Orange Box]
Route Security	[Yellow Box]	[Light Yellow Box]
Route Efficiency	[Dark Blue Box]	[Light Blue Box]
Walking and Cycling	[Purple Box]	[Light Purple Box]
Environmental	[Green Box]	[Light Green Box]
Congestion Relief/TDM	[Teal Box]	[Light Teal Box]
Passing Lanes (PL)	[Dark Purple Box]	[Light Purple Box]

[Light Green Box]	Transit Region
[Thin Green Line]	Territorial Authority Boundary
[Red Shield with Number]	State Highway
[Black Line]	Other Roads

Cartography by Critchlow Associates Ltd Ph 0800 Mapping

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### **Northland Office**

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Rathbone Street  
P O Box 1899, Whangarei.  
Telephone 09 430 4355  
Facsimile 09 459 6944

### **Hamilton Regional Office**

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P O Box 973, Hamilton.  
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### **Tauranga Office**

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Facsimile 07 578 2009

### **Napier Regional Office**

Napier Library Building  
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### **Wanganui Regional Office**

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Facsimile 06 345 7151

### **Wellington Regional Office**

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0800 MARLRDS (0800 627 573)

### **Christchurch Regional Office**

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Level 7  
123 Victoria Street  
P O Box 1479, Christchurch.  
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Facsimile 03 477 9237