

TRANSIT NEW ZEALAND STATE HIGHWAY FORECAST 2005/06 – 2014/15

Foreword

Transit's 2005/06 Programme at \$968 million is a record level of investment in state highways – for example compared with either Transit's 2004/05 allocation of \$788 million, or the November 2004 indication that \$891 million would be available for 2005/06. It results from a series of Government decisions which have increased funding for land transport overall, which in turn has been allocated by Land Transport New Zealand across the land transport spectrum – including passenger transport, local roads, demand management and research, as well as to state highways.

In our 10-year State Highway Plan for 2003/04, we made our first forecast of possible construction timeframes for major projects, based on tentative cost information and limited confidence in future allocations from the National Land Transport Fund. Our 2005/06 10-year Forecast shows that with a remarkably small number of exceptions, the additional funding approved in subsequent years has allowed those early projections to be achieved and in some cases to be outstripped.

Of the 21 large, key Auckland projects listed in Transit's 2003/04 Plan to start within 10 years, nine are completed or underway, seven have had their timing advanced, for two the timing is unchanged, and only three have been delayed.

The growing capability of the contracting industry has been fully utilised with seven projects able to be accelerated. Additional projects have also been added to our current 10-year Forecast.



David Stubbs
Chairperson

EXECUTIVE SUMMARY

Unprecedented level of activity

Transit's funding allocation for 2005/06 has increased to \$950 million. On the strength of this we are targeting \$968 million of projects and activities.

Transit has programmed large projects to a level of \$17.7 million over approved allocation to ensure sustained good progress on those projects. Transit will carefully manage its expenditure across all its areas to ensure it meets its overall allocation at the end of the year.

In addition to planning on the basis of Land Transport New Zealand's allocation, Transit has, through borrowing, advanced key Auckland projects. Transit's forecast level of spending over the next 10 years exceeds \$11 billion. This level of activity is unprecedented.

Programme/Plan/Forecast

Transit has adopted a new name for its long-term projections – its 10-year State Highway Forecast. This more explicitly reflects uncertainties around stakeholder alignment, results of consultation, obtaining consents, purchasing property and obtaining funds up to a decade ahead. As a result the estimated cost and timing of activities in the later years of the Forecast are less certain than in the early years. All estimates are based on 2005/06 estimates with an indicative provision for escalation.

We have called the first year of the Forecast our 2005/06 State Highway Programme to indicate our solid commitment to its delivery. The first three years comprise our State Highway Plan and it contains our best estimates of time and cost for the activities and projects shown. For the rest of the 10-year period we have forecast our current view of likely timing and cost for individual projects and activities.

Significant for all New Zealand – especially for Auckland

The current level of investment in state highways is the strongest commitment ever – across New Zealand, and especially in Auckland. The momentum for state highway improvements – 'Getting Auckland Going' – is in full swing. This is shown not only by the increase in Transit's expenditure in Auckland – from \$74.4 million in 2000 to approximately \$330 million in 2005/06 – but also by the solid progress currently being made on key projects.

Despite the risks of delay that large projects face as a consequence of their impact on the directly-affected communities and need for region-wide agreement on their scope, very few large projects in Auckland have been materially deferred since the Government's "Moving Forward" package was announced in February 2003. Of the 21 large, key Auckland projects listed in Transit's 2003/04 Plan to start within 10 years, nine are completed or currently underway, seven have had their timing advanced, for two the timing is unchanged, and only three have been delayed.

This very necessary focus on Auckland does not diminish the major impact of our 10-year Forecast across the rest of New Zealand. Over the next 10 years Transit expects to spend more than \$2.5 billion on improving state highways and providing transport solutions in regions outside Auckland.

EXECUTIVE SUMMARY – continued

Strongly responsive to the Land Transport Management Act

This 10-year State Highway Forecast strongly responds to the Land Transport Management Act. Key areas of emphasis for Transit are:

- › greater responsiveness to communities
- › integrating demand management into transport solutions
- › proactively managing the interface between land use and transport
- › ensuring that any transport improvements are sustainable for the long term
- › incorporating environmental and social good practice into Transit's policies and projects.

Extensive consultation occurred on the draft plan from which this State Highway Forecast was developed. It is the first prepared under the full consultation provisions of the Land Transport Management Act, with the general public having the opportunity to make submissions for the first time. Over 900 written submissions were received and the views of more than 100 organisations or individuals were heard at hearings held at 17 locations nationwide.

Much greater focus on collaboration/integration

Transit has built strong relationships in many quarters as a result of the wide impact of its activities. Collaboration is ongoing and increasing, and is a particular focus for new areas of activity including:

- › integrating growth, development and land use planning with multi-modal transport planning
- › travel demand management
- › tolling.

Co-operation essential to progress

To succeed in delivering on this State Highway Forecast, Transit must secure a high level of co-operation from key partners.

In particular, the advancement of key projects through borrowing will require full co-operation and agreement by relevant Auckland local authorities to:

- › provide adequate resources for their input to the development of the projects
- › agree the scope for each project, and
- › accelerate the timetable for processing planning applications.

With Land Transport New Zealand, we will carefully manage our State Highway Programme, especially for large new projects.

Working closely with the contracting industry will also be critical due to the volume and size of state highway contracts.

INTRODUCTION

Unprecedented level of activity

Transit is targeting \$967.7 million of state highway activities for 2005/06, based on a funding allocation of \$950M. The allocation is \$162M more than the equivalent figure in 2004/05. Transit has developed its 10-year State Highway Forecast in accordance with the consultation principles of the LTMA, and its forecast level of spending over the next 10 years exceeds \$11 billion. This is shown in Table 1.

This record level of investment results from a series of Government decisions which have increased funding for land transport overall, which in turn has been allocated by Land Transport New Zealand across the land transport spectrum – including passenger transport, local roads, demand management and research, as well as state highways.

Final levels of activity beyond Transit's State Highway Plan for the first three years will depend very significantly on the level of regional distribution funding allocated to Transit by Land Transport New Zealand. Transit has based its current State Highway Forecast on indicative advice from Land Transport New Zealand but we recognise this may change over time.

An over-allocation of \$17.7M will keep up momentum in 2005/06 – and in future years

The current climate is one of significant and positive change. Transit has resolved to maintain momentum, by:

- (a) over-allocating against Land Transport NZ's allocation in 2005/06 and 2006/07. Transit's commitment will be to hold expenditure to final approved funding levels, as each year proceeds. Potential reductions in Transit's activities will be made clear, to demonstrate that the means to hold expenditure to the approved level, if required, are real and robust.
- (b) advancing the development of, and construction start dates for, key projects in Auckland, through borrowing. The key projects are SH18 Hobsonville Deviation; SH20 Avondale Extension; and SH20 Manukau Harbour Crossing.

Transit has confirmation from the Ministry of Transport and the Treasury that borrowing will be enabled as a short-term measure to fund key projects, until funding is available from the National Land Transport Fund in accordance with the provisions of Land Transport New Zealand's 10-year forecast.

The planned borrowing makes no funding impact on the National Land Transport Programme in 2005/06. For 2006/07 and 2007/08, there will be a cost associated with the borrowing. That cost is estimated to be not more than \$8 million per year – to advance construction of the SH18 Hobsonville Deviation and further development of our proposals for the SH20 Manukau Harbour Crossing and SH20 Avondale Extension. While borrowing arrangements and debt servicing provisions have yet to be developed, Transit anticipates that most, if not all, of the cost of this initial borrowing will be covered by programme adjustments and borrowing against future revenue from tolling. The scale of borrowing needed to advance the actual construction of the SH20 Manukau Harbour Crossing and SH20 Avondale Extension is such that special consideration will be required before this can occur.

Programme/Plan/Forecast

Transit has adopted a new name for its long term projections – its 10-year State Highway Forecast. This more explicitly reflects the uncertainty in programming activities up to a decade ahead. To develop activities, Transit must deal with significant issues including stakeholder alignment, results of consultation, obtaining consents, purchasing property and obtaining funds. The scope of transport solutions and even our perception of transport problems can change significantly as these issues are resolved. As a result it is realistic to signal increasing uncertainty in timeframes the further out in the 10-year period an activity is programmed.

Years 4 to 10 in Transit's State Highway Forecast represent Transit's current forecast of the priority and possible timing and cost of activities in that period. We expect change as we progress individual activities. For example, in this State Highway Forecast, a number of activities have been accelerated reflecting the best progress we can expect to make if there is early and substantial stakeholder alignment. These include SH1 Newmarket Viaduct and Harbour Bridge to City, and SH20 Avondale Extension and the Manukau Harbour Crossing, all in Auckland.

The forward three-year view is a more robust perspective of the timing and cost estimates for activities. We refer to this three-year period as our State Highway Plan to reflect a greater level of certainty than the longer-term Forecast. Even within a three-year horizon significant change can occur.

The one-year view, in this case 2005/06, is referred to as our State Highway Programme. We expect to achieve all activities we have programmed in this year. Land Transport New Zealand funds are confirmed for the one-year Programme.

A list of current state highway projects is shown in Table 2 with indicative construction start dates.

Significant for all New Zealand – especially for Auckland

The current level of investment in state highways is the strongest ever – across New Zealand, and especially in Auckland. Through central and local government collaboration, Auckland’s transport problems are now benefiting from a co-ordinated approach that advances passenger transport, state highways and local roads in parallel with measures to help reduce demand and integrated planning to prevent new problems being created. Transit has a contribution to make to the whole, as well as its key role to manage the state highway component. The momentum for state

highways – ‘Getting Auckland Going’ – is in full swing. This is shown not only by the increase in Transit’s expenditure on state highway improvements in Auckland – from \$74.4 million in 2000 to approximately \$330 million in 2005/06 - but also by the solid progress currently being made on key projects.

Despite the risks of delay that large projects face as a consequence of their impact on the directly-affected communities and need for region-wide agreement on their scope, very few large projects in Auckland have been materially deferred. Of the 21 large, key Auckland projects listed in Transit’s 2003/04 Plan to start within 10 years, nine are completed or currently underway, seven have had their timing advanced, for two the timing is unchanged, and only three have been materially delayed. One of these is the SH18 Hobsonville Deviation. A start is now planned in 2007/08 for this project based on borrowing. The other deferrals are SH1 Newmarket Viaduct and the Eastern Corridor – projects where there have been significant design development issues to resolve.

Activities in Auckland have not reduced activities elsewhere.

As well as a continuing focus on improving road safety across the country, this State Highway Forecast includes:

Region	SH	Project Name
Otago	1	Tumai - Waikouaiti Realignment, north of Dunedin
Canterbury	73	Christchurch Southern Motorway Extension
Canterbury & Bay of Plenty	Var	TDM Implementation in Christchurch and Tauranga
Marlborough	1	Awatere Bridge
Wellington	2	Dowse to Petone Interchange
Taranaki	3	Bell Block Bypass/Mangaone Hill Four-laning, north of New Plymouth
Hawke’s Bay	50	Meeanee Rd Interchange on the Hawke’s Bay Expressway
Hawke’s Bay	38	Waikaremoana Seal Extension
Bay of Plenty		Harbour Link in Tauranga
Waikato	2	Mangatawhiri Deviation on the Maramarua Expressway
Waikato	1	Te Rapa Bypass and Avalon Drive Bypass, Hamilton western corridor
Waikato	1	Cambridge Bypass (2L) on the Waikato Expressway

This very necessary focus on Auckland does not diminish the major impact of our 10-year Forecast across the rest of New Zealand. Over the next 10 years Transit expects to spend more than \$2.5 billion on improving state highways and providing transport solutions in regions outside Auckland.

Strongly responsive to Land Transport Management Act

Of equal significance to the levels of investment represented by this State Highway Forecast are the ways in which it responds to the Land Transport Management Act (LTMA). The LTMA has:

- › encouraged an integrated approach to project development and delivery
- › introduced sustainability objectives – leading, for example, to more integrated planning of land use and transport
- › enabled tolling and concession agreements.

Transit has been working hard over the past 18 months to fully incorporate the key features of the LTMA.

These include:

- › being more responsive to the community, and providing greater opportunities for an input to the state highway forecast
- › integrating demand management into transport solutions
- › proactively managing the interface between land use and transport to ensure everyone gets fair and reasonable access
- › ensuring that any transport improvements are sustainable for the long term and that new roads don't just "clog up" within a few years
- › incorporating environmental and social good practice into Transit's policies and projects.

To reinforce the changes Transit has released a Strategic Plan, which outlines a range of new initiatives to improve road safety. The Strategic Plan has also assisted in identifying key transport issues that Transit can make a significant difference to, as set out in the table below.

Key Transport Issues

Issue	Contribution of the 2005/06 10-year State Highway Forecast to resolving the issue
Protecting the state highway network so it can carry out its primary role of inter-regional linkages between urban centres and freight movement	To promote appropriate land use development that sustains the capacity of the state highway network and develops an appropriate state highway/local roads hierarchy. Working with councils to incorporate the concept of the roading hierarchy in planning documents including, as appropriate, making best use of council plans.
Relieving moderate to severe congestion	Auckland <ul style="list-style-type: none"> › aiming to complete the motorway network including the Western Ring Route and Central Motorway improvements within the next 15 years. <ul style="list-style-type: none"> » promoting passenger transport by constructing the northern busway and a number of bus priority lanes. Tauranga <ul style="list-style-type: none"> › aiming to progressively address parts of the Strategic Roading Network that are under-capacity.

Issue	Contribution of the 2005/06 10-year State Highway Forecast to resolving the issue
	<p>Wellington</p> <ul style="list-style-type: none"> ▶ a study is underway on the Western Corridor to develop the most effective and affordable package. <p>Christchurch</p> <ul style="list-style-type: none"> ▶ protecting existing and possible new routes including the northern links, SH1 past the airport and the Southern Motorway. <p>General</p> <ul style="list-style-type: none"> ▶ seeking to prevent worsening congestion by collaborating with local authorities on land use development and growth strategies, and managing access to the state highway network. <ul style="list-style-type: none"> » promoting and contributing to integrated transport including travel demand management and passenger transport.
Road Safety 2010	Through safety improvement activities including safety retrofitting, minor safety projects, rural realignments, strategic plan initiatives (wire rope median barriers, profiled edge lines), Transit is actively closing the safety gap highlighted in the review of Road Safety 2010 targets.
Asset preservation and maintenance	To maintain the current levels of service applying least cost, whole-of-life treatments.
Walking and Cycling	Purpose-built facilities for walking and cycling that are consistent with local authority walking and cycling strategies are programmed in West Coast, Otago, Canterbury, Northland, Waikato, Nelson, Bay of Plenty and Hawke's Bay regions totalling \$1 million in 2005/06 - eg, SH88 Dunedin City to Ravensbourne. A number of improvement activities incorporate walking and cycling facilities where they are the most cost effective way of contributing to the local walking and cycling strategy/network.
Environmental and social impacts	<p>The management of environmental impacts is guided by Transit's Environmental Plan, which outlines environmental objectives and explains how these objectives will be put into practice. The aim is to incorporate effective measures in new activities to mitigate adverse environmental and social impacts.</p> <p>Transit plans to lay quieter road surfacings on existing high-volume roads through built-up areas and to implement strategic plan initiatives on waste, recycling, stormwater and noise.</p>
Regional balance	To achieve a regional balance and to take a responsible approach to addressing the geographic spread of work for the contracting industry, we have targeted a number of activities including Tumai-Waikouaiti Realignment (Otago), Awatere Bridge (Marlborough), Bell Block Bypass/Mangaone Hill Four-laning (New Plymouth), Meeanee Rd Interchange (Napier), and Mangatawhiri Deviation (Waikato).

Consultation

Consultation is another important focus - this State Highway Forecast is the first prepared under the full provisions of the Land Transport Management Act. Transit consulted more widely on its draft plan than ever before, with the general public having the opportunity to make submissions for the first time. Over 900 written submissions were received and the views of more than 100 organisations or individuals were heard at hearings held at 17 locations nationwide.

The draft plan that was issued for consultation in January signalled a 2005/06 Programme of \$985 million. That was the best funding outcome we could expect and it anticipated a very good rate of progress, especially for major projects. In general, the outcome of consultation was that we needed to do even more – expectations were not met even at the \$985 million level. There were also proposals to change the priorities of items within the total.

Transit's recommended level of \$967.7 million for the first year of its 2005/06 10-year State Highway Forecast was submitted to Land Transport NZ in May. At \$967.7 million it was a lesser amount than the \$985 million we signalled in our draft plan, but it had regard to:

- › results of consultation
- › the imbalance facing Land Transport New Zealand – between the cost of bids received and the funds available
- › the need to accommodate rising construction rates and costs.

The programme provides for a wide range of capital improvements and fully maintains our existing state highway assets.

Much greater focus on collaboration/integration

Integrating growth, development and land use planning with multi-modal transport planning

Transit's new transport planning function concentrates on planning for the long term. Integration is a key shift in our role towards managing transport systems in partnership with key stakeholders. It includes

recognising state highways as a strategic component of the transport system and actively protecting their functionality – by working with councils to incorporate the concept of the roading hierarchy in planning documents. Equally, we aim to integrate transport into planning for growth and development – eg due to tourism, areas of rapid growth, significant urban fringe development - so that all transport options are considered along with measures to actively manage travel demand.

Travel demand management

The introduction of travel demand management is a required component of the New Zealand Transport Strategy, the Local Government Act 2002 and the Land Transport Management Act 2003. This programme represents a significant step for Transit, towards managing the demands on the road network. Transit recognises that delivery of this requires an integrated approach, which will be achieved through collaboration with the Auckland Regional Transport Authority, regional councils and territorial authorities.

This Forecast includes provision for an expanded range of alternatives to the use of the private car, such as Auckland's Northern Busway, and specific bus priority measures on our state highways in Auckland, Tauranga and Christchurch. It also includes provision for further development with local authorities in Auckland of ramp metering on several congested sections of motorway. These measures are a key aspect of enabling widened choice for travellers, improving the sustainability of state highways and the wider transport network. Opportunities for dedicating road space for high occupancy vehicles and minimising delays for freight vehicles will be kept under active review.

Further expansion of Auckland's Advanced Traffic Management System (ATMS) will help to deliver consistent and predictable levels of service and journey times. ATMS includes network instrumentation, CCTV cameras, variable speed limit signs and ramp metering. In parallel with this, and to enable effective choice by users, the programme also provides for national delivery of comprehensive traveller information (both pre-trip and on-trip) through development of the Advanced Traveller Information Services (ATIS) project. These projects give effect to a nationally integrated demand management strategy.

Tolling

The Land Transport Management Act (2003) (LTMA) provided a mandate to consider tolling of state highway projects. The LTMA also enabled concessions where the private sector can finance, build and operate a toll road for a road agency (they are nominally called public private partnerships). Transit's first toll project, ALPURT B2, was granted an Order in Council to toll on 11 April 2005 and Transit is in the process of seeking approval of our second toll project, the Tauranga Harbour Link project being developed in partnership with Tauranga City Council.

Transit is considering all projects in its programme for their likely suitability for tolling. This involves a screening process to determine whether to continue with the development of a business case and toll proposal. Consideration will also be given to corridors and networks to determine if a suite of projects could work together for tolling purposes.

Tolling of projects – and perhaps of individual lanes on severely congested motorways – is being considered both for the purposes of advancing projects from their indicative construction start in the NLTP, and for implementation of demand management within the state highway network.

Screening will continue throughout 2005/06 to identify further suitable toll projects for development.

Transit has progressed its first two toll roads as public toll roads. This was judged to be the most appropriate way to develop the first toll roads under new legislation. As Transit moves to develop other toll roads it will fully consider concession agreements (public private partnerships) as a means of delivery, in particular for large projects such as the SH20 Avondale Extension in Auckland.

This Forecast includes Transit's Toll Systems Project (TSP) – a jointly managed project with Land Transport New Zealand and the Ministry of Transport – to develop a national toll management and administration system to provide services to Transit's first toll roads.

The joint stewardship recognises the services that the Transport Registry Centre can provide. Toll roads need systems to manage the collection of toll charges. Transit has initiated the TSP to establish a toll transaction management system in order to detect,

collect and manage the toll fees in time for the establishment of the first state highway toll road. TSP also aims to establish the standards for the management of toll transactions for future toll roads throughout New Zealand using technology that enables toll collection without requiring vehicles to slow down or stop.

TSP is to be funded separately from the individual toll road projects, thereby recognising the national benefits of facilitating the development of tolling systems. The responsibility for funding the toll system development is proposed to be shared between the NLTF and by a transaction charge levied on a per-transaction basis for each toll road.

Currently in design phase, the majority of TSP costs are expected to be required from June 2006 in order to have TSP built, tested and operational by the opening of the first toll road, which is envisaged in 2009.

Other examples of collaboration

- ▶ Transit works with local authorities all over New Zealand, seeking integrated solutions in both land development and transport through interactive planning processes.
- ▶ Our close relationship with Land Transport New Zealand recognises Transit's major impact on the National Land Transport Programme and the need for alignment in the way we assign priorities.
- ▶ Our close relationship with, and impact on, the contracting industry recognises the volume and size of state highway contracts and the consequent impact on the financial viability of the industry and local employment opportunities.
- ▶ Transit collaborates extensively with other transport sector agencies, including strategic planning across the transport sector as a whole.
- ▶ Transit works closely with the Road Controlling Authorities Forum in sharing knowledge and making joint progress on road-related issues across the country.
- ▶ Transit is a major contributor to improving road safety, notably with the Ministry of Transport, NZ Police and Land Transport New Zealand, including the activities of the National Road Safety Committee.

- › Our strategic alliances with local authorities achieve economies of scale in managing our respective road networks.
- › Transit participates in a number of international transport organisations which assists the development of our staff, brings world-wide knowledge to New Zealand, and showcases New Zealand achievements.

Co-operation is a must – essential to progress

To succeed in delivering on this ambitious State Highway Forecast, Transit must secure a high level of co-operation from key partners.

In particular, the advancement of key projects through borrowing will require full co-operation and agreement by relevant Auckland local authorities to provide:

- › adequate resources for their input to the development of the projects
- › early commitment to the scope for each project, and
- › timely and active support for processing planning applications.

Management of the 2005/06 State Highway Programme

The Programme for 2005/06 is nominally \$967.7 million but Transit will actively manage expenditure to stay within the funding allocation of \$950 million.

This approach will require Land Transport New Zealand to approve key components of Transit's allocation at activity class level, to provide Transit with flexibility to deliver large new projects as the year progresses.

Industry capacity

In anticipation of the number of large projects to be tendered in the Auckland area Transit introduced in consultation with the industry, a major projects programme during 2004/05. This programme ensured projects were tendered in a way that was sustainable to the construction industry, and gave the industry confidence to increase capacity.

As part of preparing the State Highway Forecast this work continues and our major projects programme takes a three-year view to match the State Highway Plan. The foundation to this programme is the staggering of projects over \$100M as follows:

- › SH20 Manukau Extension 2005/06
- › Harbour Link 2006/07 then SH18 Hobsonville Deviation 2007/08
- › SH1 Harbour Bridge to City 2008/09 (accelerated if possible).

The increase in construction activity during 2004/05 has been a factor in increases in prices across the industry. These increases were predicted by the Ministry of Economic Development as part of the Auckland Joint Officials Group work during 2004.

Transit will remain vigilant to monitoring construction cost information because any future substantial changes will have a significant effect on the future timing of projects.

Continued focus on safety

Safety on state highways is driven by our State Highway Safety Plan and the Government's "Road Safety to 2010" targets. Our ongoing strategy is to:

- › remove 'out of context' sections of state highway
- › provide median barriers on high-volume, two-lane highways
- › remove roadside hazards, and
- › provide a network of stock effluent disposal sites.

Transit's Strategic Plan seeks to accelerate our contribution to meeting '2010' targets. A wide range of projects contribute to improving safety, including safety retrofit measures which reduce the potential for crashes or reduce the consequences of vehicles leaving the road. Working with partners such as NZ Police and Land Transport New Zealand is essential as Transit continues to implement speed zoning, and to pursue collaborative solutions under the umbrella of the National Road Safety Committee and its working group, focusing in particular on the worst performing sections of the state highway network.

A key transport infrastructure asset to manage and improve

The state highway network is a key national transport infrastructure asset with a nominal replacement value of over \$15 billion. Its real value greatly exceeds this figure. Nearly half of the 36 billion vehicle kilometres travelled on New Zealand's roads each year are on state highways. In any year Transit spends more than 40 percent of its funding on state highway maintenance and operation. It is critical that Transit manages the state highway network such that its value is enhanced, and ensures it operates efficiently and safely. Well-maintained roads provide a safer and more comfortable ride and contribute to lower vehicle operating costs, particularly for heavier vehicles. The maintenance and operation budget for 2005/06 is \$336.9 million.

The 10-year forecast provides for a wide variety of routine operational activities such as traffic surveillance and management, incident response and emergency management. It also provides for a wide range of maintenance activities such as resealing, pavement repairs and strengthening, drainage, road marking, managing and improving destination signage, bridge and tunnel repairs and improvements, and landscape control.

It includes safety improvements such as upgrading lighting, laying skid-resistant road surfacing, building traffic devices to manage speed, protecting obstacles and drop-offs and widening the seal on key sections of the highway.

These activities ensure that standards are maintained or improved, across the country, despite increased damage by heavy transport.

Long term, overall funding levels

State highway improvements (capital projects) account for approximately 60 percent of Transit's annual State Highway Programme.

A key issue raised in the consultation process was the likely impact on the state highway forecast of funding major corridor improvements, particularly on high-volume routes. Examples include:

- ▶ SH1, bypasses of Warkworth and Wellsford (north of Auckland) \$50M+
- ▶ SH1, Puhoi to Wellsford – Four-laning would indicatively cost \$250M +
- ▶ SH20, Auckland Western Ring Route – indicatively \$1.5B to complete
- ▶ SH1, Auckland Newmarket to the Harbour Bridge – indicatively \$450M to \$550M
- ▶ SH1, Waikato Expressway – indicatively \$500M to \$600M to complete
- ▶ SH2, Maramarua Expressway – indicatively \$200M to \$300M to complete
- ▶ Tauranga Strategic Roading Network – indicatively \$600M to complete
- ▶ SH1, Wellington Western Corridor – indicatively \$400M to \$2B.

The challenge is to develop funding plans for the next 20 to 30 years to achieve completion of these strategies.

The National Land Transport Fund has been the main source of revenue for maintaining, operating and improving the state highway network. From 2006/07 additional funds will be available from debt repaid by tolls.

The first tranches of debt will be used to part fund the SH1 ALPURT B2 toll road (Order In Council granted April 2005) and the Harbour Link Project in Tauranga (toll proposal submitted to the MoT in May 2005). Additional tolling is expected to be raised over the forecast period. However, as further investigations into additional toll projects are still in progress, this has not been accounted for in the State Highway Forecast. Toll funding of projects provides a double benefit in that it provides additional revenue to accelerate projects while at the same time suppressing demand.

Also from 2006/07, additional funds will be made available from government debt raised on a short-term loan basis. These funds will accelerate individual projects where they are significant and ready for construction, but which cannot be funded

immediately because funds are allocated to other projects. It is proposed to accelerate the SH18 Hobsonville Deviation project by this method.

Progress on state highways is being accelerated by Government decisions to provide significant extra funding to the land transport sector. Overall, future progress will depend on a number of factors, including:

- › Further refinement of priorities after assessment of feedback from consultation.
 - › Changing scope of major projects – Transit focuses first on cost effective transport solutions which respond to the New Zealand Transport Strategy and are robust under the Land Transport Management Act. It is only after public consultation, and the planning process under the Resource Management Act that we can have full confidence in the balance of scope, cost and timing of projects.
 - › Completion of investigation phases of projects to ensure a high initial level of confidence in project scoping and cost estimating.
- › Cost escalation.
 - › Funding contributions from local authorities and developers.
 - › Use of tolling to accelerate major projects, and to supplement traditional National Land Transport Fund revenue streams.
 - › Better integration of land use planning and transport planning to moderate demand for transport systems in the longer term.
 - › The balance between rail freight charges and Road User Charges.
 - › Consideration of longer-term application of wider road charging policies.
 - › New transport technologies, including the potential to differentiate road charges according to the time of day of travel and the routes selected.
 - › The level of revenue streams entering the National Land Transport Fund eg petrol excise, Road User Charges and vehicle registration fees.

Table I**Forecasts of National Expenditure on State Highways****Maintenance and Improvements**

	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	Total
	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)	(\$M)
Maintenance											
Structural	191.5	199.4	215.4	225.0	235.0	245.3	256.2	267.6	279.4	291.8	2406.6
Corridor	77.3	80.5	86.9	90.8	94.8	99.0	103.4	108.0	112.8	117.8	971.2
Professional Services	49.9	52.0	56.2	58.6	61.2	63.9	66.8	69.7	72.8	76.1	627.3
Property Management	14.9	15.5	16.8	17.5	18.3	19.1	19.9	20.8	21.7	22.7	187.3
Preventive Maintenance	3.5	3.6	3.9	4.1	4.3	4.5	4.7	4.9	5.1	5.3	44.0
Emergency Works	18.0	18.7	20.3	21.2	22.1	23.1	24.1	25.2	26.3	27.4	226.3
Sub-total	355.0	369.8	399.5	417.2	435.7	454.9	475.1	496.2	518.2	541.2	4462.6
Improvements											
Minor Safety Projects	25.0	26.5	27.7	29.0	30.3	31.7	33.1	34.1	35.7	37.4	310.4
Committed Projects	277.7	221.9	172.9	127.0	74.4	27.7	0.0	0.0	0.0	0.0	901.5
New Projects	220.2	265.2	293.4	285.3	327.5	455.8	521.8	562.1	631.8	635.1	4198.1
Property Purchase	50.0	52.0	54.0	56.0	58.1	60.3	62.6	65.0	67.3	69.8	595.1
Walking & Cycling	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	12.0
Sub-total	573.9	566.7	549.1	498.3	491.4	576.7	618.7	662.5	736.1	743.5	6017.1
Administration	38.8	41.5	44.4	47.5	50.9	54.4	58.2	62.3	66.7	71.3	536.0
Total	967.7	978.0	993.0	963.0	978.0	1086.0	1152.0	1221.0	1321.0	1356.0	11015.7

Notes:

1. Forecast regional distribution funding:	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
	40.0	136.0	212.0	211.0	197.0	232.0	216.0	200.0	233.0	188.0

- In 2005/06 the NLTP allocation is \$950.0 million as at 1 July 2005; as stated in the Introduction, Transit will manage its expenditure to match the allocation in 2005/06.
- Expenditure excludes the value of debt funded activity.

Table 2 – Large State Highways Projects

Large State Highway Projects that were funded for construction in 2004/05

Region	SH	Project Name	Estimated Construction Cost (\$ million)
Auckland	1	ALPURT - Sector B2 Toll Road	183.7
Auckland	1	Waiouru Connection Interchange	19.2
Auckland	20	Manukau Extension	174.0
Auckland	20	Mt Roskill Extension	168.9
Wellington	2	Waiohine Bridge	4.1

Table 2 – Large State Highways Projects - continued

New Large State Highway Projects in expected construction priority order

Region	SH	Project Name	Estimated Construction Cost (\$ million)*	Expected Construction Start Date
Taranaki	3	Mangaone Hill 4-Laning	5.2	05/06
Taranaki	3	Bell Block Bypass	15.6	05/06
Auckland	1	Northcote - Sunnynook Auxiliary Lane	8.0	05/06
Hawke's Bay	50	Meeanee Rd Interchange	8.1	05/06
Auckland	1	Northern Motorway TDM	9.7	05/06
Auckland	16	Northwestern Motorway TDM	11.5	05/06
Nelson/Marlborough	1	Awatere Bridge	15.1	05/06
Auckland	1	Southern Motorway TDM	26.5	05/06
Waikato	1	Avalon Drive Bypass	32.8	05/06
Waikato	2	Mangatawhiri Deviation	47.9	05/06
Otago	1	Tumai - Waikouaiti Realignment	5.1	06/07
Canterbury	Var	Christchurch TDM Implementation	3.4	06/07
Bay of Plenty	Var	Tauranga Central Corridor TDM	3.4	06/07
Northland	1	Waitiki Landing to Cape Reinga Seal Extension	13.8	06/07
Waikato	1	East Taupo Arterial	16.5	06/07
Bay of Plenty		Harbour Link	27.5	06/07
National	Var	Toll Systems Project	66.1	06/07
Wellington	2	Dowse to Petone Interchange	79.3	06/07
Auckland	18	Hobsonville Deviation	193.1	07/08
Hawke's Bay	2	College Road to Silverstream Realignment & PL	3.4	07/08
Wellington	1	Centennial Highway Median Barrier	16.8	07/08
Wellington	1	Kapiti Western Link Road - Stage 1	30.8	07/08
Auckland	Var	ATMS Stage IV	86.9	07/08
Bay of Plenty	36	Pyes Pa Bypass	10.4	07/08
Auckland	1	Newmarket Viaduct	142.7	08/09
Auckland	1	AHB Storm Water Upgrade	3.6	08/09
Manawatu/Wanganui	2	Manawatu Hill Realignment	5.5	08/09
Waikato	1	Church to Avalon Dr 4-Laning	5.9	08/09
Taranaki	3	Rugby Road Underpass	6.4	08/09
Auckland	1	Newmarket Viaduct to Greenlane Aux	31.3	08/09
Auckland	1	HBTC	369.6	08/09
Gisborne	35	Tolaga - Gisborne Seal Widening	4.3	08/09
Auckland	20	Manukau Harbour Crossing (possible accelerated start)	189.7	09/10
Auckland	20	Avondale Extension (possible accelerated start)	1150.0	09/10
Hawke's Bay	2	Takapau Plains Seal Widening	4.3	09/10
Northland	1	Akerama Curves Realign & PL	6.1	09/10
Canterbury	1	Sawyers Arms to Memorial Ave 4-Laning	12.0	09/10
Otago	1	Caversham Bypass 4-Laning	12.3	09/10
West Coast	6	Gates of Haast Realignment	13.8	09/10

* adjusted for latest market changes, future escalation of 5% per annum in 2005/06 and 3% per annum in 2006/07 and beyond, and contingencies.

Table 2 – Large State Highways Projects - continued

New Large State Highway Projects in expected construction priority order

Region	SH	Project Name	Estimated Construction Cost (\$ million)*	Expected Construction Start Date
Southland	94	Homer East Portal Avalanche Shed	18.1	09/10
Canterbury	73	Christchurch Southern Motorway Extension	121.3	09/10
Auckland	16	Te Atatu Interchange Westbd Off Upgrade	5.9	09/10
Hawke's Bay	38	Waikaremoana Seal Extension	22.5	09/10
Taranaki	3	Normanby Overbridge Realignment	6.8	10/11
Manawatu/Wanganui	1	Ohingaiti-Makohine Realignment	10.0	10/11
Auckland	16	Brigham Creek Extension	31.3	10/11
Northland	12	Matakohe Realignment	5.2	10/11
Northland	1	Snake Hill Realignment	6.2	10/11
Canterbury	1	Yaldhurst Rd to Waterloo Rd 4-Laning	5.3	11/12
Canterbury	1	Memorial Ave to Yaldhurst Rd 4-Laning	13.3	11/12
Waikato	25	Kopu Bridge Replacement	40.8	11/12
Waikato	2	Maramarua Deviation	66.2	11/12
Auckland	20A	Kirkbride Rd Grade Separate	27.8	11/12
Auckland	16	Te Atatu - Royal 6-Laning	29.0	11/12
Gisborne	35	North Tolaga Seal Widening	4.3	12/13
Manawatu/Wanganui	1	Foxton South Curves	4.7	12/13
Hawke's Bay	5	Tarawera Hill Realignment and PLs	6.1	12/13
Waikato	1	Piarere - Oak Tree Bend Realignment	9.3	12/13
Auckland	16	Waterview to Rosebank 8-Laning	51.7	12/13
Nelson/Marlborough	6	Whangamoia South Realignment	16.0	12/13
Manawatu/Wanganui	2	Papatawa Realignment	7.6	12/13
Taranaki	43	Tangarakau Gorge Seal Extension	4.8	12/13
Waikato	1	Te Rapa Bypass	94.9	12/13
Northland	1	Kamo Bypass Stage 2	8.3	13/14
Wellington	1	Basin Reserve Improvements	27.0	13/14
Bay of Plenty	2	Te Maunga-Domain Rd 4-Laning	31.4	13/14
Waikato	1	Cambridge Bypass (2L)	34.2	13/14
Nelson/Marlborough	6	Hope Saddle Realignment	7.1	13/14
Wellington	2	Whitford Brown Interchange	17.5	13/14
Wellington	3	Melling Interchange	84.5	13/14
Nelson/Marlborough	60	Ruby Bay Bypass	10.2	13/14
Wellington	2	Rimutaka Corner Easing (Muldoon's)	10.1	13/14
Bay of Plenty	2	Tauranga Eastern Arterial	240.0	13/14
Canterbury	1	Okarahia North Realignment	6.2	14/15
Waikato	1	Ngaruawahia Bypass	160.0	14/15
Canterbury	1	Christchurch Northern Arterial Rural	27.7	14/15
Waikato	1	Rangiriri Bypass	27.0	14/15

* adjusted for latest market changes, future escalation of 5% per annum in 2005/06 and 3% per annum in 2006/07 and beyond, and contingencies.