WELLINGTON STATE HIGHWAY PLAN

EXECUTIVE SUMMARY

Transit's forecasts of expenditure in Wellington for the next 10 years are set out in Table W1.

These forecasts of expenditure are based on a 10-year plan of maintenance and improvements, including commitments. The timeframe for the development and construction of the improvements proposed in the 10-year plan are indicative only, and might change, for example, as a result of changes in funding availability and delays in project development.

Major features of the Wellington 10-year plan are:

- Wellington Inner City Bypass, for a construction start in 2003/04, subject to a decision of the Environment Court
- > MacKays Crossing Overbridge on SH1, north of Paekakariki, for a construction start in 2003/04
- > Dowse to Petone Upgrade on SH2, including a new interchange at Dowse Drive and overbridge at Korokoro, for a construction start in 2005/06
- > Kapiti Western Link Road (Stage 1), for a construction start in 2006/07, as a joint project with the Kapiti Coast District Council
- > curve easing at Muldoons Corner on the Rimutaka Hill Road on SH2, for a construction start in 2006/07
- > expansion of the Active Traffic Management System currently in operation in the Ngauranga Gorge, for an installation start in 2010/11.

Other projects in the 10-year plan for construction in the next three years are:

- > Waiohine Bridge Replacement on SH2, north of Greytown, for a construction start in 2004/05
- > Te Marua Curves Realignment on SH2, north of Upper Hutt, for a construction start in 2004/05
- > improvements to the Kent Terrace/Ellice Street intersection at the Basin Reserve, for a construction start in 2003/04
- > intersection improvements at:
 - » Old Hautere Road on SH1, for construction in 2005/06
 - » Flightys/Murphys Road Intersection on SH57, for construction in 2005/06
- > street lighting between Petone and Ngauranga on SH2, for construction in 2004/05
- > cycling and walking facilities in Kapiti on SH1, Masterton on SH2 and Petone to Horokiwi on SH2, for construction in the next three years.

BACKGROUND

The two major state highway arterials in the Wellington region are SH1 in the western corridor connecting to Kapiti and Horowhenua districts and SH2 through the Hutt Valley connecting to the Wairarapa via the Rimutaka Ranges. Both of these corridors have been identified in the Regional Land Transport Strategy as requiring substantial upgrading to relieve congestion, and cope with traffic growth and improve safety.

In addition to the major road projects which have been provided for the 10-year plan, significant attention will be given to improved management of traffic on existing roads. This focus on traffic operations will be essential to maximising the efficiency of the existing network and ensuring that alternative modes, including public passenger transport, can operate effectively.

Recent Improvements

A number of major improvements to state highways within the Wellington region have been completed in recent years. These include:

> SH1: Raumati Straight Four-Laning

> SH1: Pukerua Bay to Plimmerton Four-Laning

➤ SH1: Ngauranga Gorge Active Traffic

Management System

> SH58: Pauatahanui Bridge Replacement and

Roundabout

Current Improvements

Projects currently under construction include:

> SH1: Pukerua Bay to Paekakariki Street Lighting

> SH1: Plimmerton to Paremata Upgrade

> SH1: Lindale Grade Separation, Paraparaumu

> SH2: Kaitoke Realignment, north of Upper Hutt

PROPOSED IMPROVEMENTS

The locations of Wellington projects in the 10-year plan are shown on Figure W and the expected cost and timeframe for the development and construction of these projects are indicated in Table W2.

Large improvement projects (with construction costs more than \$3M) have been planned for 10 years and small and medium-sized projects (with construction costs of less than \$3M) have been planned for 3 years.

SHI: Wellington Airport to Ngauranga

The only major improvement in the 10-year plan to improve SH1 between Ngauranga and Wellington Airport is the Wellington Inner City Bypass. This bypass will provide a safer and more efficient route to Wellington Hospital, Wellington Airport and southern and eastern suburbs, and the northern gateway to the city.

Inner City Bypass

The Wellington Inner City Bypass involves altering and redefining existing roads and building 700 metres of new road, to provide a one-way pair of two-lane roads between the Terrace Tunnel and Basin Reserve in Wellington, with dedicated turning lanes and a 50 km/h speed limit. A new footpath and cycleway is to be built alongside the new roadway as well as extensive landscaping and restoration of historic buildings.

All planning approvals under the Resource Management Act have been obtained. In May 2002, the New Zealand Historic Places Trust finalised its approvals but these have been appealed to the Environment Court. The Court's decision is expected shortly which will enable construction to commence in 2003/04.

Ngauranga to Aotea Quay Eight-Laning

Transit is currently investigating a scheme to widen the motorway between Ngauranga and Aotea Quay comprising four lanes in each direction to avoid the need for traffic to merge from four to three lanes at each end. This proposal requires further discussion with the Wellington City Council to consider the effects of additional traffic on the local road network and the future development of railway land adjoining Aotea Quay. At this stage, this project has not been included in the 10-year plan.

Basin Reserve

When the Inner City Bypass has been completed, it is proposed to give further consideration to the need for any further upgrading of the road network around the Basin Reserve. In the long term, beyond the 10-year period, further consideration may be given to the widening or duplicating of the Mt Victoria Tunnel.

SHI: Western Corridor (Otaki to Ngauranga)

A number of major improvements are required to SH1 between Otaki and Ngauranga. The following large projects are included in the 10-year plan:

> SH1: Kapiti Western Link Road (Stage 1)

> SH1: MacKays Crossing Overbridge

Other projects under development in the western corridor between Otaki and Ngauranga include:

> SH1: Kapiti Upgrade

> SH1: Otaki to Peka Peka Four-Laning

> Transmission Gully Motorway

Kapiti Western Link Road

The proposed Western Link Road is a joint project with Kapiti Coast District Council to build a parallel route to SH1 between Peka Peka, north of Waikanae, and Poplar Avenue, at Raumati. This parallel route will free up congestion on both the state highway and local roads.

The Environment Court approved the designation for the Kapiti Western Link road in 2002. There were two appeals to this decision, which were heard in the High Court in March 2003. The appeal was upheld, in part, with the matter referred back to the Environment Court. A further hearing is expected in late 2003. The first stage of this project is included in the 10-year plan for design in 2006 and construction in 2006/07. The second stage is not currently included in the 10-year plan.

MacKays Crossing

Transit is proposing to construct a 120 metre-long overpass of the railway line at MacKays Crossing, straighten the highway for about 1 km south of the railway crossing, and construct new accesses to Queen Elizabeth II Park and Whareroa Farm. This project allows for a connection to the proposed Transmission Gully Motorway. The 10-year plan indicates that construction of this project will commence during the 2003/04 construction season.

Kapiti Upgrade of SHI

Preliminary investigations are underway on a scheme to upgrade SH1 between Peka Peka and Poplar Avenue, if possible to the standard of a four-lane expressway with restricted property access and grade-separated intersections. This work is being undertaken jointly with the Kapiti District Council which is responsible for community consultation. The Wellington Regional Council is also being consulted on passenger transport issues.

At this stage, the priority is to develop the Kapiti Western Link road to provide additional capacity through Kapiti and, accordingly, upgrading of the existing highway to expressway standard is not included in the 10-year plan.

Otaki to Peka Peka Four-Laning

Transit is currently investigating a scheme for a fourlane expressway between Otaki and Peka Peka. The preferred route runs east of the existing highway through Otaki and east of the railway line south of the Otaki River to Te Horo. At Te Horo, the preferred alignment crosses the railway line and continues south on the western side of SH1.

Transit has consulted extensively with key stakeholders, along with interested and affected parties, with the intention of lodging a designation for the preferred route within the next few months. Currently, construction of this project is not included in Transit's 10-year plan.

Transmission Gully Motorway

The Transmission Gully Motorway is a proposed alternative route into Wellington between MacKays Crossing and Linden to relieve congestion on the existing highway and provide an improved level of service, particularly through the coastal settlements of Pukerua Bay, Plimmerton and Paremata.

All appeals against the designation have been resolved, Transit is continuing to purchase properties along the route and there is a programme of planting along the route to mitigate the adverse effects of the large-scale earthworks which will be required for the ultimate construction of this motorway. A total of 44 hectares are being planted and 40,000 trees were planted last spring. Funding for further planting is included in the 2003/04 programme.

While it is envisaged that the Transmission Gully Motorway will be a toll road, substantial funding will still be required to fund more than half the cost of this project which will not be covered by toll revenue. Further work is to be undertaken to refine the cost estimate as a basis for reviewing the priority of this project and possible funding arrangements. In the meantime, Transit is continuing to investigate interim improvements to the existing highway, such as improvements to the Beach Road Intersection at Paekakariki.

SH2: Hutt Corridor (Upper Hutt to Ngauranga)

The only large project proposed for SH2 in the Hutt corridor is the Dowse to Petone Upgrade to reduce delays and in the 10-year plan improve safety on this section of highway. The proposed improvements include building 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). These improvements also include altering the Petone Park and Ride facility, and minor safety improvements to the highway between the existing intersections. It is proposed to start construction of this project in 2005/06.

Following completion of the Dowse to Petone Upgrade, changes in traffic flows at the Melling intersection will be reassessed. This is currently a major access point to the Hutt City centre and a substantial part of this traffic is expected to divert to the new Dowse Interchange. It is envisaged that eventually a grade-separated interchange will be required at Melling but, at this stage, this project has not been included in Transit's 10-year plan.

To improve safety at the intersection of SH2 with SH58, Transit is proposing to build a full interchange similar in layout to the Porirua Mungavin Interchange, and realign and upgrade a 5km section of SH58 to four lanes with a median barrier. Currently, these projects have not been included in the 10-year plan.

A reversible additional lane on SH2 between Petone and Ngauranga has been proposed by Wellington Regional Council in its draft Hutt Corridor Plan. This is intended to operate as a tolled lane. The proposal is still in the early stages of development and, therefore, no timing has been determined for this project in the 10-year plan.

It is also proposed to investigate the need for the upgrading of SH2 along River Road. This investigation is to be undertaken jointly with Upper Hutt City Council.

SH2: Wairarapa Corridor (Masterton to Upper Hutt)

The two most significant projects proposed for SH2 in the Wairarapa corridor are:

- SH2: Waiohine Bridge Replacement, north of Greytown
- > SH2: Rimutaka Corner Easing (Muldoons Corner)
- > SH2: Te Marua Curves Realignment, north of Upper Hutt

Transit has been working closely with the South Wairarapa District Council and the Wellington Regional Council on a scheme to replace the narrow bridge over the Waiohine River, north of Greytown. The current bridge is not only a route security risk but also can cause flooding by restricting river flow. A replacement bridge is planned for design in 2003/2004 and construction in 2004/2005.

The Rimutaka Corner Easing project is to straighten some tight curves at "Muldoons Corner", about 500 metres south of the Rimutaka summit, where the current alignment requires some heavy vehicles to regularly cross the centre line. It is proposed to realign these curves to a 60km/h design speed with appropriate curve easing. This project is planned for design in 2005/06 and construction in 2006/07.

It is proposed to improve the Te Marua curves, just north of Upper Hutt by means of some minor realignments and seal widening. This project is proposed for design in 2003/04 and construction in 2004/05.

Active Traffic Management System

The first stage of the Active Traffic Management System (ATMS), which has been installed in the Ngauranga Gorge, has been most effective in smoothing traffic flows and ensuring a faster response to incidents. It is proposed to extend the system to other high-capacity sections of SH1 and SH2 although, due to funding constraints, this work is not planned in the 10-year plan until 2011/2012.

Safety Projects

The following small and medium-sized safety projects (with construction costs less than \$3M) are included in the 3-year plan:

- > SH1: Old Hautere Road Intersection Improvements, south of Otaki
- > SH1: Paremata to Johnsonville Street Lighting
- > SH1: Kent Terrace/Ellice Street Intersection Improvements, Basin Reserve
- SH2: Petone to Ngauranga Gorge Street Lighting, Jundgeford
- > SH58: Flightys/Murphys Road Intersection Improvements

At the Kent Terrace/Ellice Street intersection at the Basin Reserve, it is proposed to install traffic signals at the pedestrian crossing and to improve safety and the flow of traffic along Kent Terrace and around the Basin Reserve.

Walking and Cycling

The following walking and cycling projects are included in the 3-year plan:

- > SH1: Kapiti Cycle Facilities
- > SH2: Masterton Cycle Facilities
- > SH2: Hutt Valley Cycle Facilities

These three projects include a number of minor improvements to make the respective routes more cycle-friendly.

It is also proposed to investigate options for completing the cycleway between Petone and Ngauranga.

MAINTENANCE and OPERATIONS

In addition to undertaking maintenance and improvements to meet future levels of service, and to preserve the asset, Transit proposes to:

- resurface 65 lane-kilometres of the network in 2003/04
- > upgrade the Ngauranga Gorge median barrier
- continue to maintain and improve the Pauatahanui inlet seawall
- continue to work with Civil Defence and Emergency Management to refine emergency response plans around Wellington
- improve coordination with NZ Police and emergency services in the management of incidents that affect the operation of the network
- improve coordination of signalised intersections through Wellington City during peak weekend travel times.

Table WI

Forecasts of Expenditure on Maintenance and Improvements

Wellington Region

| | 03/04 (\$M) | 04/05 (\$M) | 05/06 (\$M) | 06/07 (\$M) | 07/08 (\$M) | 08/09 (\$M) | 09/10 (\$M) | 10/11 (\$M) | 11/12 (\$M) | 12/13 (\$M) | Total (\$M) |
|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Maintenance | | | | | | | | | | | |
| Structural | 6.4 | 6.6 | 6.7 | 6.8 | 7.0 | 7.1 | 7.2 | 7.4 | 7.5 | 7.7 | 70.3 |
| Corridor | 6.2 | 6.6 | 6.9 | 7.2 | 7.6 | 7.9 | 8.2 | 8.6 | 9.0 | 9.4 | 77.7 |
| Professional Services | 2.7 | 2.8 | 2.8 | 2.9 | 2.9 | 3.0 | 3.1 | 3.1 | 3.2 | 3.2 | 29.7 |
| Property Management | 3.8 | 4.8 | 4.9 | 5.0 | 5.1 | 5.2 | 5.3 | 5.4 | 5.5 | 5.6 | 50.6 |
| Preventive Maintenance | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 4.6 |
| Emergency Works | 0.7 | 1.2 | 1.3 | 1.3 | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.6 | 13.3 |
| Sub-total | 20.2 | 22.4 | 23.1 | 23.7 | 24.4 | 25.0 | 25.8 | 26.5 | 27.2 | 28.0 | 246.2 |
| Improvements | | | | | | | | | | | |
| Minor Safety Projects | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 7.1 |
| Committed Projects | 26.0 | 12.3 | 0.4 | 0.2 | - | - | - | - | - | - | 38.9 |
| New Projects | 10.2 | 17.1 | 16.9 | 22.4 | 26.4 | 29.0 | 27.3 | 25.0 | 18.6 | 11.0 | 203.9 |
| Property Purchase | 8.3 | 5.3 | 5.4 | 6.3 | 6.5 | 6.7 | 6.9 | 7.1 | 7.3 | 7.5 | 67.1 |
| Walking & Cycling | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 1.0 |
| Sub-total | 45.2 | 35.4 | 23.5 | 29.7 | 33.7 | 36.4 | 35.0 | 32.9 | 26.8 | 19.4 | 318.0 |
| Total | 65.4 | 57.8 | 46.5 | 53.4 | 58.1 | 61.5 | 60.7 | 59.4 | 54.0 | 47.4 | 564.2 |