WAIKATO STATE HIGHWAY FORECAST

EXECUTIVE SUMMARY

Transit's forecasts of expenditure in Waikato for the next 10 years are set out in Table W1. For forecast purposes only, Transit has anticipated an indicative level of regional distribution funding. Final allocations of regional distribution funding will be determined annually.

These forecasts of expenditure are based on a 10-year plan of maintenance and improvements, including projects for which funding is already committed. The timeframe for the development and construction of the improvements proposed in the 10-year forecast is indicative only, and is likely to change depending on the project's importance within the context of the regional land transport strategy, its national priority, the resolution of any local concerns and property issues.

The Waikato 10-year state highway forecast seeks to protect and preserve the existing asset, improve route efficiency and safety between Auckland and Cambridge, and improve road safety generally.

Major features of the forecast are:

- Mercer to Longswamp section of the Waikato Expressway, currently under construction
- Longswamp to Rangiriri central median safety barrier, currently under construction
- further development of the Cambridge Bypass, the Rangiriri Bypass and the Ngaruawahia Bypass
- major rural safety projects at several locations, including Mangatawhiri and Maramarua on SH2
- Hamilton city bypasses comprising:
  - Avalon Drive Bypass between Rotokauri Road and Norton Road
  - Te Rapa Bypass
- a new, two-lane Kopu Bridge on SH25
- four intersection improvements in Hamilton city
- continued development of a funding package with Taupo District Council for the construction of an eastern bypass of Taupo
- safety improvements on rural highways in the next three years comprising small rural realignments, seal widening, bridge widening and intersection improvements
- eleven more passing lanes for development and construction in the next three years
- two new stock effluent disposal facilities
- four cycling improvement projects.

KEY REGIONAL TRANSPORT ISSUES

Through Waikato's regional land transport strategy, long term council community plans, and Transit's state highway forecast, local and central government is aiming for a sustainable land transport system that meets the objectives of the New Zealand Transport Strategy (NZTS) and the Land Transport Management Act (LTMA), i.e. assisting economic development, assisting safety and personal security, improving access and mobility, protecting and promoting public health, and ensuring environmental sustainability.

To achieve a sustainable land transport system we need to consider both land use and transport trends and behaviour. In this respect regional and local growth strategies (or emerging views where strategies have not been written) and planning documents are critical to supporting regional land transport strategies.

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

- residential development to the north and south of Hamilton city, and the growth of an industrial/ commercial hub, or 'inland port' at Te Rapa
- route efficiency and safety between Auckland and Cambridge on SH1 and between Pokeno and the turn off to SH27 on SH2
- road safety:
  - of particular concern is the separation of safe interaction of heavy freight traffic and general traffic (including tourist traffic)
  - spillages from stock trucks
  - speed as a major contributing factor in crashes.
- forestry traffic – over the next 5 to 10 years forestry harvesting is expected to increase from 10 million to 12 million tonnes from the Central Plateau forests with much of the product being exported through the Port of Tauranga
- restrictions on inter-regional corridors that could inhibit economic development
- tourist traffic particularly on the Coromandel Peninsula and on the routes linking Auckland, Waitomo Caves, Lake Taupo and Rotorua
- cycling – Hamilton City is built on relatively flat terrain ideally suited to cycling.

TRANSIT'S CONTRIBUTION TO TRANSPORT ISSUES

Economic growth, and resultant increases in traffic demand, means the state highway network in the Waikato will require substantial upgrading within the next 10 to 20 years. The major road corridors planned for upgrading to four-lane expressway standard are SH1 between Mercer and Cambridge (Waikato Expressway) and SH2 between Pokeno and Mangatarata (Maramarua Expressway).

The locations of possible Waikato projects in the 10-year forecast are shown in figure WK. The expected cost and possible timeframe for the development and construction of these projects is indicated in Table WK2.

The timeframe for the development and construction of the improvements proposed in the 10-year forecast is indicative only and is likely to change depending on the use of additional funding from central government (known as 'regional distribution funding') to advance activities. While Transit anticipates it will have further expenditure from regional distribution funding this is yet to be determined. Indicative construction start dates are based on expected funding levels if 65 percent of regional distribution funding for Waikato were allocated to state highways, spread evenly over 10 years.

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

Efficient and Safe Transport Corridors

Waikato Expressway

Good progress has been made in recent years on construction of the Waikato Expressway. The Rangiriri to South of Ohinewai section and the Huntly Internal Bypass have recently been completed. The very difficult and expensive section between Mercer and Longswamp is currently under construction, along with the installation of a central median barrier between Longswamp and Rangiriri connected to the already barrier protected Rangiriri to South of Ohinewai section.

Meanwhile, the designation for the Cambridge Bypass is in place and a proposed early start for design work is scheduled. Further development work will occur on the Rangiriri Bypass and the Ngaruawahia Bypass. Transit is completing the designations for the last remaining section of the Waikato Expressway, the Huntly Bypass.

The remaining Waikato Expressway projects are to be reviewed as a toll corridor to determine whether they would raise enough revenue to advance their start dates in the programme. The toll strategy will identify the projects for inclusion in the corridor to obtain optimum revenue levels, while achieving a suitable demand management approach. This would incorporate toll management and administration through the Toll Systems Project as identified seperately in this strategy.

Maramarua Expressway

On SH2 between Pokeno and Mangatarata it is proposed to implement major safety improvements particularly around the townships of Mangatawhiri and Maramarua. A realignment at Grahams Stream Bridge is also being investigated. While the four-lane Maramarua Expressway is a long-term activity, improvements to the alignment of the existing highway, together with passing lanes and traffic management improvements will be undertaken in the meantime to improve safety and provide more frequent passing opportunities.

Kopu Bridge

Designations and resource consents for replacement of the Kopu Bridge on SH25 are now in place and design of the new bridge is due to commence in the next year.

Passing Lanes

In accordance with the strategy of providing passing lanes at five-kilometre intervals on high-volume highways the three-year plan for passing lanes includes those:

- SH1: between Ngaruawahia and Hamilton
- SH1: between Cambridge and the Desert Road
- SH2: between Pokeno and Mangatarata
- SH2: between Paeroa and Waihi
- SH3: between Te Kuiti and Mokau
- SH25A: between Kopu and Hikuai.

Additional passing lanes are provided for in the forecast depending on progress with other projects and the availability of regional distribution funding.

Urban Areas

Work is proceeding with the Hamilton City Council on developing a number of schemes including the Te Rapa Bypass, the Avalon Drive Bypass, the Church to Avalon Drive Four-laning and improvements to the southern approaches to Hamilton. The Avalon Drive Bypass will relieve congestion on Avalon Drive between Rotokauri Road and Norton Road. The Te Rapa Bypass will be required, in part, to support the extensive growth planned in Hamilton north, including the Rotokauri Growth Area. The regional preference is for the Te Rapa Bypass to be completed before the Ngaruawahia Bypass.

Within Hamilton City, improvements are proposed at the following intersections:

- SH1: Killarney Road
- SH1: Hillcrest and Morrinsville Road
- SH1: Morrinsville Road (SH26)
- SH3: Ohaupo Road/Kahikatea Drive (SH1).

In Cambridge, Transit proposes to improve the Victoria/Queen Street intersection.

Other Bypasses

The Taupo District Council has been developing a scheme for an eastern bypass of Taupo between the SH1/5 junction, north of Wairakei, and SH1 north of Taupo Airport. The East Taupo Arterial (ETA) is designed to take heavy traffic away from the main Taupo lakefront and the Central Business District. A designation has already been obtained for this bypass and the Taupo District Council is proceeding with design work. Programming of this activity is proceeding ahead of priority through the contribution of the local authority.

The Taupo District Council proposes to construct the first three stages of the bypass between Taupo Airport and Broadlands Road with an expectation that Transit will assume responsibility for the fourth stage between Broadlands Road and the SH1/5 junction, including a crossing of the Waikato River.

Road Safety

Transit plans to continue removing 'out of context' sections of state highways, roadside hazards and provide a network of stock truck effluent disposal facilities. A number of large, medium and smaller activities has been proposed. These include rural realignments, urban and rural intersection improvements and bridge widening or replacement.

Rural Highways

A large rural realignment under construction is SH5 Tapapa Curves Realignment (east of Tirau).

Other rural realignments proposed for construction in the next 10 years (some of which are dependent on progress with other projects and the availability of regional distribution funding) are:

- SH1: Piarere to Oak Tree (south of Cambridge)
- SH39: Kiwi Road (north of Otorohanga)
- SH4: Tikitiki Road North (south of Te Kuiti)
- SH25: Three Kings Corner (north of Thames)
- SH31: Tihiroa East (east of Otorohanga)
- SH2: Waimata (east of Waihi)
- SH5: Mamaku North (east of Tirau)
- SH2: Owharoa Stream (east of Paeroa).

A number of other improvements may be possible depending on availability of the regional distribution funding.

Bridge widening or replacement projects in the forecast include:

- SH1: Matarawa Bridge widening (south of Tokoroa)
- SH3: Awakino Tunnel Widening (south of Te Kuiti).

Improvements are also proposed to the following rural areas in the next three years:

- SH26: Tahuna Road Intersection (north of Morrinsville)
- SH26: Intersection with SH27 (east of Morrinsville)
- SH25: Thames to Te Puru (north of Thames)
- SH1: Piarere Junction (south of Cambridge)
- SH1: SWATT 2010 (Piarere to Taupo)
- SH26: Kirikiri Stream (south of Thames).

A number of other improvements may be possible depending on the regional distribution of funding.

Flood Protection Work

Transit is working with a number of stakeholders on an integrated package of flood protection measures on the Thames Coast as part of Project Peninsula. Transit will look to improve waterway capacity on the following bridges:

- SH25: Te Puru Stream (north of Thames)
- SH25: Tararu Stream (north of Thames).

Stock Effluent Disposal Facilities

Two stock effluent disposal facilities in the Waikato area have been prioritised in addition to the recently constructed one at Te Kuiti (SH3). These are at SH1 Putaruru and in the vicinity of SH1 and SH5 north of Taupo.

Walking and Cycling

A number of walking and cycling activities are either underway or proposed for urban areas in the Waikato over the next three years.

In Hamilton a separate cycleway to the Waikato Institute of Technology is planned on Avalon Drive to cater for student cyclists. Improvements will also be made at Massey Street in Hamilton West to better cater for cyclists.

Where appropriate, cycle facilities will be planned to tie into local authority cycling networks.

MAINTENANCE and OPERATIONS

In addition to maintaining current and future levels of service and preserving the asset Transit proposes to:

- improve road condition information to road users at critical points on the network, especially forward warning of traffic delays for southbound traffic on the Bombay Hills
- improve road condition information in snow and ice-affected areas and for flood-prone sections of SH25
- further develop ice-prediction technology with provision of more weather stations
- improve road safety by removing significant obstacles on road verges and by providing guardrail safety barriers in hazardous locations
- maintain hazard-response plans and warning systems particularly in relation to the Mt Ruapehu lahar risk
- maintain and improve skid resistance of the network targeted at further reduction in wet-weather crashes
- implementation of a seismic retrofitting programme for a small number of 'at risk' bridges in the region.

Table WK1

Forecasts of Expenditure on Maintenance and Improvements

Waikato Region

	05/06 ($M)	06/07 ($M)	07/08 ($M)	08/09 ($M)	09/10 ($M)	10/11 ($M)	11/12 ($M)	12/13 ($M)	13/14 ($M)	14/15 ($M)	Total ($M)
Maintenance											
Structural	39.8	41.5	44.8	46.8	48.9	51.0	53.3	55.6	58.1	60.7	500.4
Corridor	11.6	12.1	13.0	13.6	14.2	14.9	15.5	16.2	16.9	17.7	145.7
Professional Services	9.5	9.9	10.7	11.2	11.7	12.2	12.7	13.3	13.9	14.5	119.4
Property Management	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.9	1.9	2.0	16.7
Preventive Maintenance	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	6.8
Emergency Works	3.1	3.6	3.9	4.0	4.2	4.4	4.6	4.8	5.0	5.2	42.9
Sub-total	66.0	69.0	74.5	77.8	81.2	84.8	88.6	92.5	96.6	100.9	831.9
Improvements											
Minor Safety Projects	4.9	5.1	5.5	5.7	6.0	6.2	6.5	6.8	7.1	7.4	61.2
Committed Projects	25.3	2.0	0.0	0.0	-	-	-	-	-	-	27.3
New Projects	17.5	55.6	85.3	63.1	36.1	19.2	41.5	113.0	151.5	178.8	761.6
Property Purchase	3.0	3.1	3.2	3.3	3.4	3.6	3.7	3.8	4.0	4.1	35.1
Walking & Cycling	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.0
Sub-total	50.9	66.1	94.2	72.4	45.8	29.3	52.0	123.9	162.9	190.6	888.2
Total	**116.9**	**135.1**	**168.7**	**150.2**	**127.1**	**114.1**	**140.6**	**216.4**	**259.5**	**291.5**	**1720.2**

Note: regional distribution funding for state highways forecast to be $130M over 10 years