

18. 2001 LIFELINES UPDATE

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Corporate Plan Output: Information and Advice to the Council	

The purpose of this report is to advise Council of progress towards the protection of City Streets Unit’s ‘Lifelines’ assets, and to provide an indicative programme for future works. A detailed report has been prepared by the City Design Unit and has been separately distributed to members of the City Services Committee.

BACKGROUND

The 1994 ‘Lifelines’ study considered the likely effects of various natural hazard events on the city’s infrastructural assets. City Streets Unit assets most likely to be at risk from major events include the 159 bridges, 3 underpasses, 298 retaining structures, 469 culverts, and all roads adjacent to riverbanks or the coast. It is essential that the roading network is able to maintain its integrity in order to provide access during and following a major natural hazard event. A network that is able to ‘survive’ such an event will form an integral part of the city’s recovery. Bridges and culverts are important links, not only in the roading network, but also for other authorities providing power, water, communications, and sewer services for the city’s residents. Recent studies into the Alpine Fault show that there is a 65% probability of fault movement within the next 50 years. Further studies on Christchurch soils have confirmed that soils beneath large areas of the city are highly likely to liquefy in an Alpine Fault event.

PROGRESS

The city’s bridges are key components of the transportation network. Achievements to date have focussed on low cost retrofitting options for high-risk bridge structures, and planning, design, and soils testing and analysis. Much of the information collected in terms of design and soils analysis data is directly transferable to retaining structures, culverts, and road subgrade soils in areas which are likely to liquefy in an earthquake. While the focus to date has been on retrofitting bridges in order to minimise damage from a major earthquake event, there has been little detailed study undertaken into the effects on City Streets assets from the other main natural hazards – wind, snow, flooding, and tsunami.

FUNDING ISSUES

Most of the relatively low cost bridge retrofitting options have now been completed, and increased funding will be required to ensure that further bridges, culverts, and other essential elements of the transportation network are retrofitted to withstand a major ‘Lifelines’ event. A skeletal 10 year programme has been prepared; with detail included in the City design report, and funding to meet this programme has been proposed in the 2001/02 budget.

Chairman’s

Recommendation: That the information be received.