

city viaduct city viaduct city viaduct

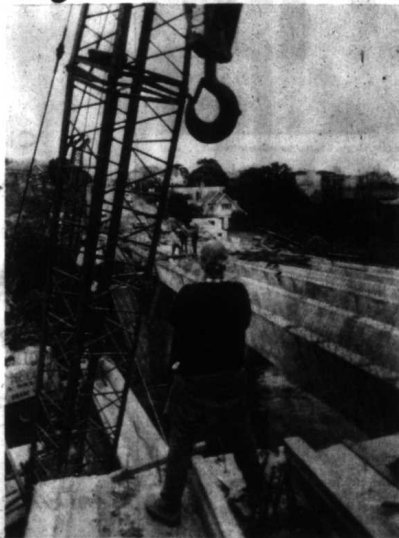


## Carrington Street viaduct key to one-way traffic in NP's centre

The Carrington St Viaduct, one of New Plymouth's most impressive examples of civil engineering, will be opened tomorrow by the city's Mayor, Mr D. V. Sutherland.

The structure, which links Vivian St and Leach St, forms part of a one-way pair street system which comes into operation on Monday.

The viaduct link creates a further east-west route across the city — and the one-way system is designed to move traffic faster, thus relieving congestion in the commercial centre.



A Daily News  
Special Feature

The bridge is 120 metres (350 ft) long, has two west-bound lanes, and a pedestrian walkway on the southern side.

Work on the site started in May last year. The viaduct itself and approaches have been completed, but other work will continue during the next financial year on lining and culverting part of the Huatoki Stream and building an on-ramp to Vivian St from Carrington St.

When this work is finished the job will have cost about \$800,000, most of it funded by the National Roads Board.

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The Vivian Street viaduct provides an important link in the east-west flow of traffic, and joins a long list of bridges built by this company.

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*Under  
the  
road*



Massive reinforced concrete piers, part of the support structure

*Finished three months ahead of schedule*

The main contract for the Carrington St viaduct was awarded to Riddick Bros and Still Ltd, New Plymouth, on June 16, 1975.

Their prize was \$443,335 and there were four other tenderers for the project.

The city engineer's estimate for the job was \$484,000. McMillan and Julian Ltd won the piling contract with a bid of \$96,119, against the engineer's estimate of \$78,600.

There were three other tenderers.

Design and specifications were handled by New Plymouth consultants Thomson, Buchan and Chong.

They were also responsible for the Huatoki Stream lining and culvert for the on-ramp and this project will go out for tender shortly.

The viaduct attracted a \$3 for \$1 NRB subsidy and the city council's share was raised mainly by loan.

**AHEAD**  
The viaduct has been completed three months ahead of schedule.

Riddick Bros and Still experienced a good work flow, a good material supply, and little bad weather.

A spokesman for the company said that if anything helped the work rate it was good foreman management and a pleasant site.

Riddicks boxed and poured the viaduct's piers themselves.

The pre-stressed T-beams which the piers support were cast at Stratford by Stressed Products Ltd. Fletcher Steel sup-

plied the reinforcing. Asphaltic Construction laid the paving, and Moeller and Durant installed the lighting and electrical services.

Burrell and Wood crafted and installed the aluminium handrails. A. J. Cowley was responsible for the earthworks, Roebuck Construction provided the cranes to lift the beams and Firth Industries supplied the concrete.

## FIRST SCHEME IN 1960s

The concept of a bridge spanning the Carrington St gully in New Plymouth and linking Vivian St and Leach St was born in the optimistic 1960s when the National Roads Board had an abundance of money and enthusiastic road engineers.

Mr Ted Borrell a former town planning consultant to the city council, is credited with the first official recommendation of a viaduct.

His bridge was shown in the 1962 district planning scheme and endorsed by the transportation master plan in 1968.

That plan came up with an integrated traffic network incorporating a one-way pair street system, of which the viaduct was a major component.

All the options examined for an alternative northern outlet over the Waikakaho River included the one-way pair.

The alternative outlet, however, never eventuated, even though it was

supported by the NRB.

It was officially scrapped this year in the transportation plan review — which concluded that the traffic and population projections made in 1965 would not be achieved during the 20-year design period.

The committee of experts came up with the cheaper alter-

district roading programme within a few years.

Mr Sutherland remembers how he convinced the former Minister of Works, Mr Percy Allen, that the NRB had to support the proposal:

"He came to a meeting in the council chambers and I showed him on a model in

The viaduct and one-way pair have survived the obstacle course to become a reality.

The traffic experts advising the NRB and the city saw this system as the most practicable and long-term method of getting high volumes of traffic out of the city's central business area, which was showing signs of becoming an environmental nightmare.

Because of the city's confinement to a narrow coastal plain, there is only one east-west route across the city.

In the central area this splits into three routes: Gill St-St. Aubyn St, Devon St, Powderham St, Courtenay St.

The creation of a further cross-town route on Leach St, Vivian St will take a significant amount of through traffic out of the central business area.

### A Daily News Special Feature

the foyer that we wanted," he said.

"Development at Bell Block and the port and our limited east-west routes were what convinced him."

"I can remember Mr Allen turning to his secretary and saying: 'I think we'd better programme this.'



City Engineer's Department

**THE ONE WAY PAIR — MONDAY**

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*But if you do muff it  
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and turn back when clear*

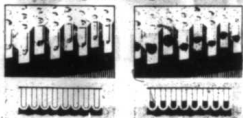
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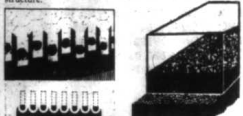
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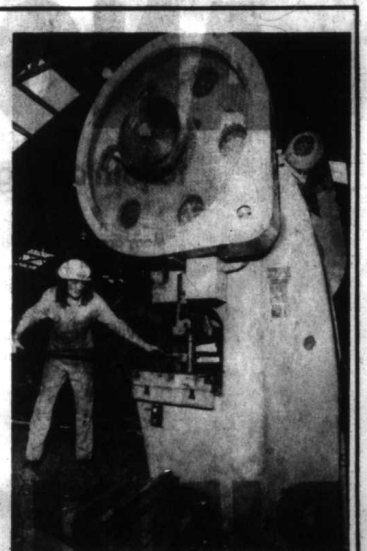
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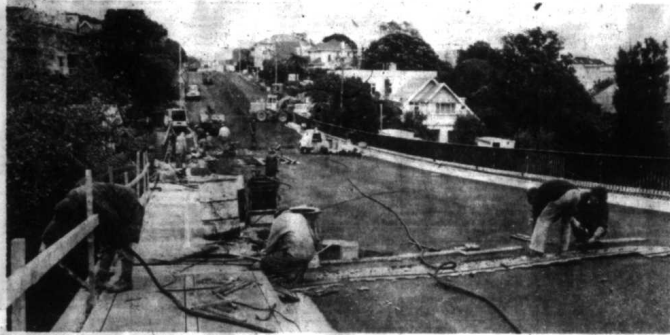
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The Viaduct nears completion

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**Unfinished**

The Carrington St viaduct and one-way pair project in New Plymouth is not quite finished, but it is sufficiently advanced to be brought into use now.

Still to be constructed is an on-ramp to carry traffic from Carrington St up onto Vivian St.

Before this can be done, the Huatoki

Stream running under the structure must be lined and culverted. Traffic signals will also be needed, but their location cannot be determined until the system is evaluated after practical experience.

The final cost will be about \$800,000, three-quarters of it to be provided by the NRB

**Opposition to plan change**

New Plymouth's Carrington St viaduct was designed as part of an integrated transportation system to shift traffic across the city faster and channel it on to a second northern outlet over the Waiwakāho River.

The recent decision to drop the second outlet in favour of a different and less costly scheme more likely to attract National Roads Board support, brought protests on two principal grounds — the original southern motorway route should have been

adhered to and the one-way pair will not function properly unless it is connected to a full second northern outlet. The main critics have been the New Plymouth Chamber of Commerce, and the city council works committee chairman, Mr L. W. Penrose.

Mr Penrose made a determined but abortive bid to contest the council's decision in September to adopt a northern alignment for the arterial link, as recommended by the transportation advisory committee.

"The one-way pair was designed as part of an integrated transport system, part of which was a second outlet," he said.

**DAILY NEWS Special Feature**

"We had both public and editorial support for that system. Now that it has been substantially altered, it can only be assumed that the viaduct is an unjustified extravagance."

"I see little point in having a one-way pair if it will only succeed in speeding traffic to the same old bottleneck at Fitzroy," he said.

The New Plymouth Chamber of Commerce's trade and transport sub-committee was less vehement in its criticism.

The chairman, Mr G. R. Greenbank, accused the council of giving the public insufficient time to consider the amended plan.

His sub-committee's report compared the merits and demerits of the two route alignments. The adopted northern alignment was particularly criticised because it would do nothing to eliminate the existing Waiwakāho bridge bottleneck and, for a "very small difference in cost, would result in further gross interference" with householders.

The viaduct and one-way pair were singled out for special mention.

"The sub-committee is critical," said the report. "of the proposed one-way pair and has strong doubts that this has the volume of traffic to warrant such restrictive measures."

"The improvement of Vivian St is an addi-

tional unplanned-for expense likely to be borne entirely by the city and there will be needed a total reorganisation of traffic flows in all streets crossing the pair."

"The Mayor, Mr D. V. Sutherland, has shouldered the responsibility of answering the critics. "HASTY"

"For people such as the Chamber of Commerce (and presumably Mr Penrose) to suggest that council has made a hasty decision is so much nonsense," he said. "It has been a continuing exercise since 1965 and the advisory committee's report 13 months on the review."

"We must remember that in the optimistic 1960s, National Roads Board engineers were guilty of gross over-design of highways and we were part of that era. "Neither now or ever will the NRB seriously consider a highway through Glen Avon."

"Furthermore, the existing Waiwakāho bridge has a capacity of 21,000 vehicles per day, while the new bridge will have a capacity of 32,000 vehicles per day."

"We know the NRB and Ministry of Works considered the one-way pair and viaduct a good investment because they aid for much of it."

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