



# news

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60 Denmark Street, Kew, Victoria 3101

**Melbourne's urgent road needs**

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T.S. 1045

## THE CRB

The CRB is the State Road Authority of Victoria. There are about 160,000 kilometres of public roads in Victoria, of which 23,893 km comprise the CRB's network of the State's principal roads.

The lengths of roads declared or proclaimed under the Country Roads Act are State Highways 7108 km,

freeways 220 km, main roads 14,680 km, tourists' roads 825 km, forest roads 1060 km.

The CRB's aim is to create an efficient road system within the context of the overall transportation needs of the community.

## DIRECTORY

### CRB HEAD OFFICE:

60 Denmark Street  
Kew 3101  
Tel.: 86 5321

### BAIRNSDALE DIVISION

75 Nicholson Street  
PO Box 484  
3875  
Tel.: 52 3344

### BALLARAT DIVISION

1315 Sturt Street  
3350  
Tel.: 32 7361

### BENALLA DIVISION

50-52 Clarke Street  
PO Box 135  
3672  
Tel.: 62 2288

### BENDIGO DIVISION

57 Queen Street  
PO Box 204  
3550  
Tel.: 43 9133

### DANDENONG DIVISION

360 Whitehorse Road  
Nunawading  
PO Box 78  
3131  
Tel.: 878 0555

### GEELONG DIVISION

63 McKillop Street  
PO Box 576  
3220  
Tel.: 21 4744

### HORSHAM DIVISION

138 Fibrace Street  
PO Box 441  
3400  
Tel.: 82 0121

### METROPOLITAN DIVISION

Head Office  
60 Denmark Street  
Kew 3101  
Tel.: 86 5321

### TRARALGON DIVISION

120 Kay Street  
PO Box 158  
3844  
Tel.: 74 3311

### WARRNAMBOOL DIVISION

54-56 Kepler Street  
PO Box 21  
3280  
Tel.: 62 8057

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# Personnel

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## MOTORISTS WILL SEE "VALUE FOR MONEY"

The Chairman of the Country Roads Board, Mr. R. E. V. Donaldson said the Government's intention to increase motor registration fees would assist in easing the cash crisis facing the CRB.

Mr. Donaldson welcomed the Government's decision "because it gives us an increased capacity to work towards achieving what the motoring public demands of us".

He said the Board's maintenance and resealing programme this summer could now be expanded from the limited programme imposed because of severe shortage of funds.

"The major benefit to road users will be in our increased capacity to maintain standards, and for the motorist, this is directly related to safety and vehicle wear and tear," Mr. Donaldson said.

**"The motorist will certainly see value for money," he said.**

Additional assistance will be provided to municipalities and in the area of major projects, Mr. Donaldson said "we would expect to be able to give some of our top priority jobs a useful injection of money".

"We will be able to look at our planning for urgently needed projects such as the Nepean Highway widening, the F9 Freeway in South Melbourne, the extension of the Mornington Peninsula Freeway northerly along Wells Road, the Drouin-Warragul Section of the Princes Freeway, and the Mornington Peninsula Freeway from Mt. Martha to Dromana," he said.

## MALVERN LINK

The State Government is establishing a top-level committee to study and recommend a suitable direct link between the Mulgrave and South-Eastern freeways along the Gardiners Creek Valley.

This follows talks between the Minister of Transport, Mr. Rafferty, and the Minister for Planning, Mr. Hayes.

The Ministers said the Government wanted positive action on a site for the link as quickly as possible.

They said the committee would give careful consideration to the provision of a freeway or major arterial roads to connect the two freeways.

**Alternative routes would be investigated and there would also be a close examination of all aspects of drainage, parklands and water qualities which would be involved or likely to be involved in linking the freeways.**

A senior officer of the Ministry of Planning would be chairman of the committee.

The Country Roads Board, Ministry of Transport, Ministry of Conservation, the Melbourne & Metropolitan Board of Works and three councils affected — Malvern, Camberwell and Hawthorn — would be represented.

**FOR FURTHER information relating to articles in this publication, or other matters concerning the CRB, contact the Public Relations Section, tel. 860-2160 or 860-2584.**

**David E. Webb, Public Relations Officer.**

**Steve J. Parsons  
Peter J. Carey  
Danny Gocs**

# The CRB and safer

# pedestrian movement

People do not realise how easily an accident can occur when they cross at road level and disregard the pedestrian facility

In recent years there has been an increasing public demand for the construction of pedestrian overpasses and underpasses.

Growing traffic volumes have been accompanied by an increase in road fatalities, both to motorists and pedestrians.

Forty two percent of persons killed in road accidents in urban areas are pedestrians, of which slightly less than one quarter are under the age of 17 years, nearly all of them school children.

Fatalities or injuries to pedestrians, particularly children, bring a very emotional reaction from the public.

The reaction is generally a call for a pedestrian overpass, but an overpass may not be the best solution. Signalized crossings, or manned school crossings, can in the majority of instances provide a safe and more economical crossing.

A further question to be considered is the usage of pedestrian overpasses and underpasses once they are provided.

In a survey carried out by the CRB, it was found that only 38 percent of adults and 72 percent of children crossing the road in the vicinity of a pedestrian overpass or underpass used the facility.

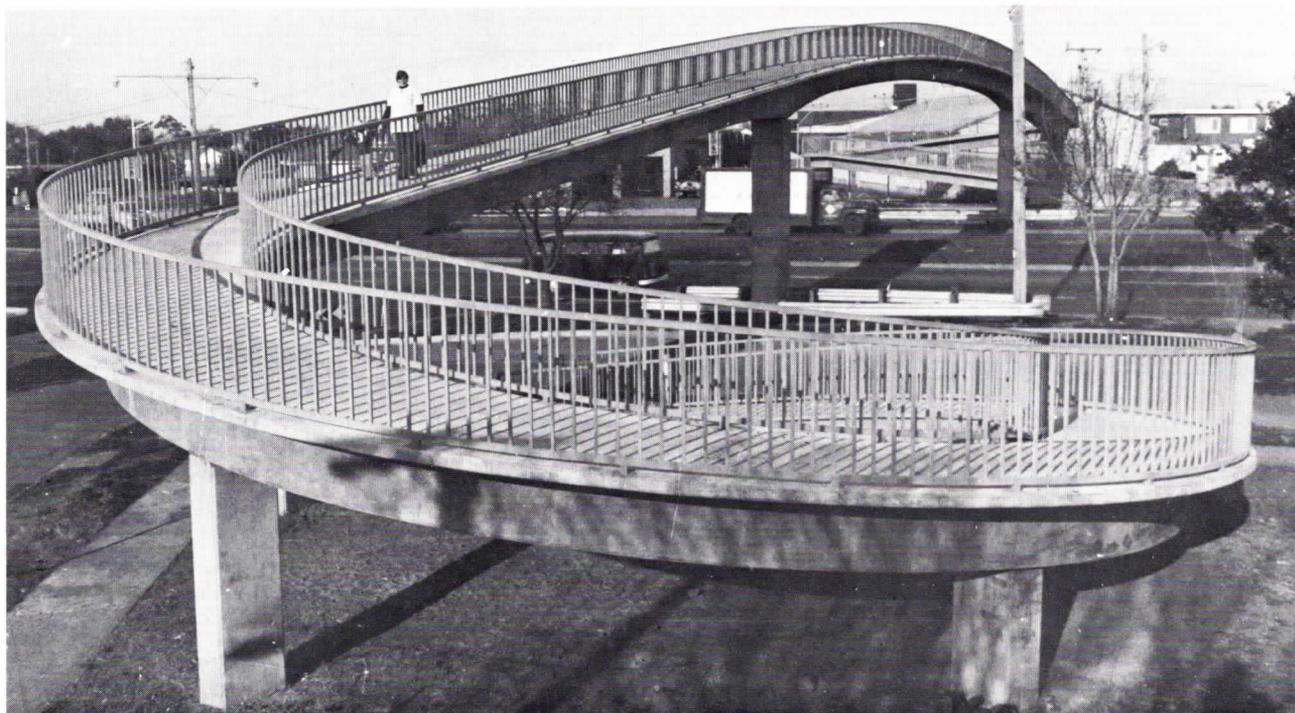
#### Usage of Grade Separated Pedestrian Facilities

Facility	Adults	Children
Underpass	42%	68%
Overpass	35%	76%
Both	38%	72%

The low percentage of adults using the crossings suggest that people do not realise how easily an accident can occur when they cross at road level and disregard the pedestrian facility.

Undoubtedly there are particular circumstances where the construction of a pedestrian overpass or underpass is the best way of safeguarding pedestrians, especially children, who cross the road.

● Below : The Gordon Avenue overpass of the Princes Highway at Oakleigh ... a modern design and easy crossing for people with prams and bicycles.



**In 1965 the State Government set aside funds for the construction of school pedestrian overpasses or underpasses on State highways, and the scheme has since been extended to Main Roads.**

New road works, such as freeways or road widening, carried out by the CRB may also involve the construction of a pedestrian facility.

The CRB has recently completed five overpasses.

- **Tullamarine Freeway, Essendon**

Pedestrian overpasses at Vaughan Street and Bristol Street were constructed to provide pedestrian access to Essendon Airport across Lancefield Road which is being upgraded to freeway standard. Lancefield Road carries 36,700 vehicles daily between 7.00 a.m. and 7.00 p.m.

The Vaughan Street overpass was completed in May, 1976, and cost \$96,000. The Bristol Street overpass was completed in July, 1976, and cost \$80,000.

- **Princes Highway, Oakleigh**

A pedestrian overpass at Gordon Avenue enables students of Oakleigh High School and residents to cross the highway safely.

The overpass was completed in March, 1976, and cost \$205,000.

The Princes Highway carries 35,000 vehicles daily between 7.00 a.m. and 7.00 p.m.

- **Mulgrave Freeway**

A new pedestrian overpass at Kernot Avenue, Mulgrave, provides a safe crossing over the Mulgrave Freeway for students from Mazenod College and Monash Primary School, and people using a nearby recreation reserve.

The overpass was completed in October, 1976, and cost \$181,000.

The Mulgrave Freeway carries 17,000 vehicles daily between 7.00 a.m. and 7.00 p.m.

- **Dandenong Road, Windsor**

The pedestrian overpass across Dandenong Road at Hornby Street provides a safe crossing serving four local schools and people using Alma Park.

The overpass was completed in October, 1975, and cost \$180,000.

Dandenong Road in this locality carries 39,000 vehicles daily between 7.00 a.m. and 7.00 p.m.

During the next 18 months, nine pedestrian overpasses will be under construction by the CRB in the metropolitan area:

- across the Eastern Freeway at Trennery Crescent, Collingwood

- across the Princes Highway East near Dandenong High School
- across Sydney Road, Coburg
- across Brighton Road, St. Kilda
- at Watsonia Railway Station
- across Warrigal Road at Euston Road, Oakleigh
- across Epsom Road at Burrowes Road, Essendon



**Pedestrians cross High St near Kew junction.... the traffic flow is interrupted and the risk of an accident is greater here than crossing on an overpass or underpass.**

- across Grimshaw Street near William Street, Greensborough
- across Warrigal Road at Kangaroo Road, Oakleigh

**When investigating the need for an overpass or underpass, the CRB, with the co-operation of the Road Safety and Traffic Authority, takes into account the following factors:**

- traffic volumes
- average speed of traffic
- the number of pedestrians crossing the road
- the age range of the pedestrians
- the type of road to be crossed (single or divided road, and its width)
- the accident history of the site

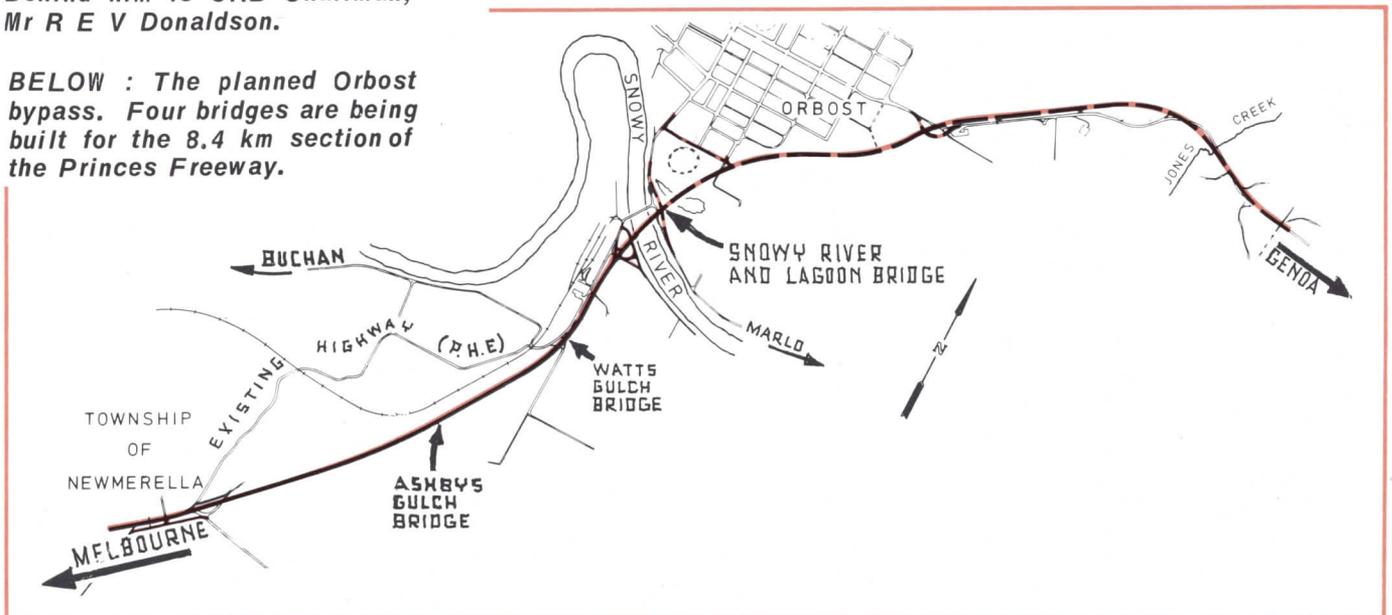
# Transport Minister opens \$2.4m bridge

## A FLOOD BEATER



*The official opening of the Snowy River bridge. The Transport Minister, the Hon J A Rafferty cuts the ribbon. Behind him is CRB Chairman, Mr R E V Donaldson.*

**BELOW :** The planned Orbost bypass. Four bridges are being built for the 8.4 km section of the Princes Freeway.



The first stage of a \$9 million CRB freeway bypass project aimed at providing a permanent road access to Orbost during flooding of the Snowy River was opened on 25th November, 1976, by the Minister of Transport, the Hon. J. A. Rafferty.

The first stage opened by Mr. Rafferty was a 366.4 m bridge over the Snowy River — a river made famous by poetry and one of the world's most sophisticated hydro-electric schemes.

The Snowy River bridge is one of four to be built as part of the 8.4 km project spanning the Orbost flood plains. The Snowy River bridge and another over the nearby Ashbys Gulch are among the 10 longest bridges in Victoria, being the eighth and fifth longest respectively.

The new bridge removes through traffic from Orbost township and crosses the Snowy River 45 m downstream of the old bridge.

The new Snowy River bridge is the fourth to provide a crossing to the township of Orbost. The first, in 1891, lasted just two years before it succumbed to flood waters. The existing bridge was built in the 1920s as a road and rail bridge, and was again partly washed away by flood waters in 1934.

The new bridge, built by the CRB at a cost of \$2.4 million, is 1.6 metres above the record flood levels of 1971.

The overall project not only raises the bridges above all previous flood levels but the elevated freeway carriageway from Newmeralla across the flood plain to the Princes Highway east of Orbost have been designed and constructed to allow road access to Orbost during all flood conditions.

The project is a milestone for the people of Orbost, road transporters and the many tourists who travel this scenic link between Melbourne and Sydney.

Among the official guests at the opening ceremony was the Federal Minister for Transport, the Hon. P. J. Nixon, a resident of the Orbost area and Federal Member for Gippsland.

# across the Snowy River



**ABOVE :** The new bridge – Orbst's fourth since 1891 – dwarfs the old bridge that provided a river crossing for more than 50 years. The new bridge has been built 1.6 metres above the record flood levels of 1971.

**BELOW :** After the official opening, it was time for the unofficial closing of Orbst's old bridge. Local farmer Garry Downey, on horseback, led residents, a vintage car and men dressed as bushrangers across the bridge to a small ceremony.



## WORLD ROAD NEWS

Hungary's 1976-1980 road program calls for the construction of 99 km of new motorway and reconstruction of 300 km of highways around Budapest and in residential areas. Another 6,500 km will be widened or strengthened.

The Hungarian Road Association, in a recent report, noted that between 1970 and 1975 the rate of passenger and goods transport by motor vehicle increased while that by rail declined.

Early in 1976 the new Hungarian Highway Code went into effect providing for speed limits for passenger cars of 120 kmh on motorways, 100 kmh on other roads and 60 kmh in residential areas. For other motor vehicles it was 80 kmh, 70 kmh and 50 kmh respectively.

•••  
A north-south motorway with six lanes will be built in Yugoslavia as an extension of the E94 motorway. It will link the Austrian and Greek borders and connect the following communities in Yugoslavia: Ljubljana, Zagreb, Belgrade, Nish and Skopje.

The 1,185 km motorway will cost about \$US2,200 million.

•••  
Kenya has received a \$US4 million loan from the World Bank for a rural access roads project, and the bank's affiliate, the International Development Association has extended a \$US4 million credit for the project.

•••  
An unusual contract has Finnish contracting organisations building a new town for 20,000 people in Russia and accepting iron ore in payment.

As part of the arrangement, the Finns will build new railway lines and upgrade and build highways to import the ore. As a result, the transport infrastructure in northern Finland is being greatly improved.

•••  
Hong Kong's multi-million dollar highway program is to be accelerated further in the five year period of 1976-80. It is expected that at least \$US320 million will be spent on roads in that period as compared with \$US220 million in the past 15 years.

The basis for Hong Kong's future massive program could be a 500 page comprehensive transport study submitted this year by Wilbur Smith & Associates. The study cost \$US1.72 million and took three years to complete.

•••  
Financing has been arranged for construction of the 700 km "Uranium Highway" which will link Tahoua-Agades-Arlit in Niger.

•••  
The Gulf Freeway near Houston, Texas, USA, is being fitted with preferential signals which will allow high occupancy vehicles free flow priority entry. Carpools will be included.

•••  
Source "World Highways", journal of the International Road Federation, August, 1976.

## Pinewood pupils study...

# LIVING IN FREEWAYLAND

Students from Pinewood Primary School recently won the primary school section of the Age "Environment '76" competition.

The subject they chose was the Mulgrave Freeway and its impact on the community.

Mr. B. Kent, one of the teachers assisting the students said:

"Beginning with the view that it was a terrible thing, they now see the virtue of the freeway. They have learned what the CRB is doing to prevent noise and visual pollution, and have ascertained the views of the people closest to it.

"The children are now informed. What's more, they are actually attached to the freeway. Its been a significant educational venture."

Although the project was basically for grade six, students from most of the grades contributed.

As part of the project the students took aerial photographs from a light aircraft, interviewed local residents and business people, conducted traffic counts, researched past items in The Waverley Gazette, and talked to CRB engineers and Waverley Council town planners.

From these investigations the children made models, drew charts, studied local history, prepared an information booklet and made a comic entitled "Bellbird and Foxy".

*Bellbird and Foxy were two little characters the children found in a reserve nicknamed Bellbird Gully, off Forster Road, adjoining the Freeway.*

*Bellbird and Foxy left their homes while the freeway was being built, but returned when work was finished.*

*Bellbird: "The road is beautiful with all the trees."*

*Foxy: "I didn't think it would be like this."*

*"We will stay here now won't we Foxy?"*

*"Yes, Bellbird."*

### From the Information Booklet

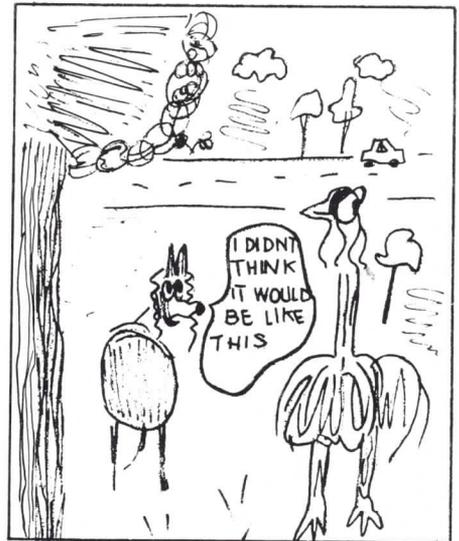
*"It will be much easier for the traffic that wants to go a fair distance to travel*

*on the Freeway, instead of driving along the normal roads and getting caught up in the traffic and being late for where you want to go."*

*"... we don't have head on smashes."*

*"... no intersections and many accidents take place at intersections."*

**"THE FREEWAY WILL MEET THE NEEDS OF FUTURE TRAFFIC"**



● A drawing from the Pinewood students' freeway project. Below: The display at Environment '76.



## Roadside rest areas

Roadside rest areas are an important safety consideration when designing roads.

Providing areas where motorists can rest or have a meal breaks the tedium of driving long distances. They help maintain driver alertness.

Two rest areas were constructed as part of the Hume Freeway, Wallan to Broadford project. These areas provide eating and toilet facilities for motorists travelling along Victoria's main interstate highway.

On the Western Highway a rest area at the Victorian-South Australian border, near Kaniva, has been constructed to provide picnic, barbecue, toilet facilities and a tourist information board.

**REST AREAS ARE PROVIDED BY THE CRB FOR THE SAFETY AND ENJOYMENT OF MOTORISTS - PLEASE KEEP THEM TIDY.**

# MELBOURNE'S ROAD NEEDS...



**MELBOURNE today is greatly dependent on the motor vehicle and inevitably will continue to be.**

**This sprawling, low density metropolis is very much a product of the motor car.**

Only about 12% of journeys in Melbourne are now to or from the Central Business District (CBD). The proportion was 15% to 18% in 1964; and the Metropolitan Transportation Committee predicted that it would be 9% in 1985. So about 88% of all journeys are journeys in the suburbs or between the suburbs and the country. And these suburban journeys are very dispersed.

Most journeys to and from the CBD are made by public transport; two-thirds of them over the whole day, and 83% in peak hours. But the great majority of suburban journeys (both movement of people and movement of goods) can only be made effectively and economically by rubber tired vehicles.

Indeed, virtually all of the internal movement of goods in the metropolitan area is by motor vehicle.

To a large extent this is a post-war development. It is only in the last 20 years that most people have come to have access to motor vehicles; and it is only the motor vehicle which has made possible the low density development of Melbourne which has occurred in this period.

There are of course causes for concern about this urban sprawl; and no doubt we would all be better off if we could control its future expansion into the proposed urban corridors. But even apart from the motor industry's importance to the economy there is no doubt that the car has immeasurably enriched the lives of most people.

**The real problem for the road authorities is that in many areas we are trying to feed large numbers of vehicles on to an arterial road system not planned for it and with insufficient capacity to carry it. And, in other areas no proper arterial road system has yet been built.**

The significance of this may perhaps be better understood when it is considered that in Australia, urban arterial roads, plus sub-arterial or collector roads, together constitute only 1.6% of the mileage of all roads — and only 21% of the urban road mileage. But, they carry 47% of all vehicle miles and 75% of all urban vehicle miles.

Urban arterial roads are a problem in all Australian capital cities, but a greater problem

in Melbourne and Sydney than in any of the others.

The volume of work that needs to be done to correct this situation is increasing rapidly. And road construction costs are increasing much faster than the funds available for road works. So the amount of work we are able to do is decreasing.

The CRB's aim is to eventually correct most of our present freeway terminal problems and provide reasonable continuity and dispersion by means of a combined system of freeways and major arterial roads.

At present the Board has a number of major projects under construction, and is planning others, as shown on the plan (see next page).

## ● Outer Ring Road

An outer link between the major centres of population and commerce both within and adjacent to the metropolitan area. The ring road will link Frankston, Dandenong, Ringwood, Greensborough, Broadmeadows and Keilor.

What will an outer ring road do to support the best form of development of Melbourne's outer suburbs, and the consequent long-term effects on metropolitan traffic patterns? A Study is underway to answer such questions.

## ● Lower Yarra Crossing — F9 Extension

The F9 extension from Lower Yarra Crossing to Kingsway will become the southern bypass of the city centre of National Route 1.

The completion of the West Gate and Johnson Street bridges and the F9 extension will provide improved connections to the western suburbs, without the need to travel through the central business district.

For people in the western suburbs, it will mean greatly increased ease of access to the community facilities south of the city, including the National Gallery, Botanic Gardens and Domain, and the Sidney Myer Music Bowl.

It will form the final major arterial link between Geelong and the south-eastern suburbs, avoiding the city centre. This link will attract through traffic and therefore draw it away from residential streets in the western suburbs and South Melbourne.

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### ● Mulgrave Freeway

The existing freeway provides a bypass function of Dandenong for traffic destined for the Latrobe Valley and Gippsland. The Princes Highway East through the Latrobe Valley is the most heavily trafficked rural highway in the State, and a substantial portion of this traffic is generated in the metropolitan area.

Completed works and extensions of the freeway from Springvale Road to Forster Road, Mount Waverley, will cost in the vicinity of \$40 million. Extension to Warrigal Road will substantially improve the freeway's effectiveness, and studies are being undertaken on the need for a road connection to the South Eastern Freeway at Tooronga.

### ● Dandenong Road, Malvern

This section is the last remaining undivided highway bottleneck on Dandenong Road between the St. Kilda Junction and Dandenong, and, it will form part of the continuous divided highway link along National Route 1 between Geelong and Dandenong.

The work planned by the CRB to provide dual carriageways will improve traffic flow along Dandenong Road, and improve the various intersections along the length.

### ● Bridge Road, Richmond

The CRB has developed three alternative widening schemes to remove the bottleneck in Bridge Road, between Punt Road and Church Street.

The plans were forwarded to the Richmond City Council which has indicated its preference for a scheme to provide a similar width to Bridge Road east of Church Street. A final scheme has not yet been recommended to the Government.

### ● Eastern Freeway

The extension of the Eastern Freeway along the Eastern Corridor reservation to Doncaster Road will further improve access to the expanding eastern suburbs. In addition, it will remove traffic from local residential streets.

The retention and amendment of the Metropolitan Planning Scheme reservations for the Eastern Freeway corridor beyond Doncaster Road and for a bypass of Ringwood have been approved by Cabinet following the Eastern Corridor Study, a comprehensive investigation which involved many public and private bodies.

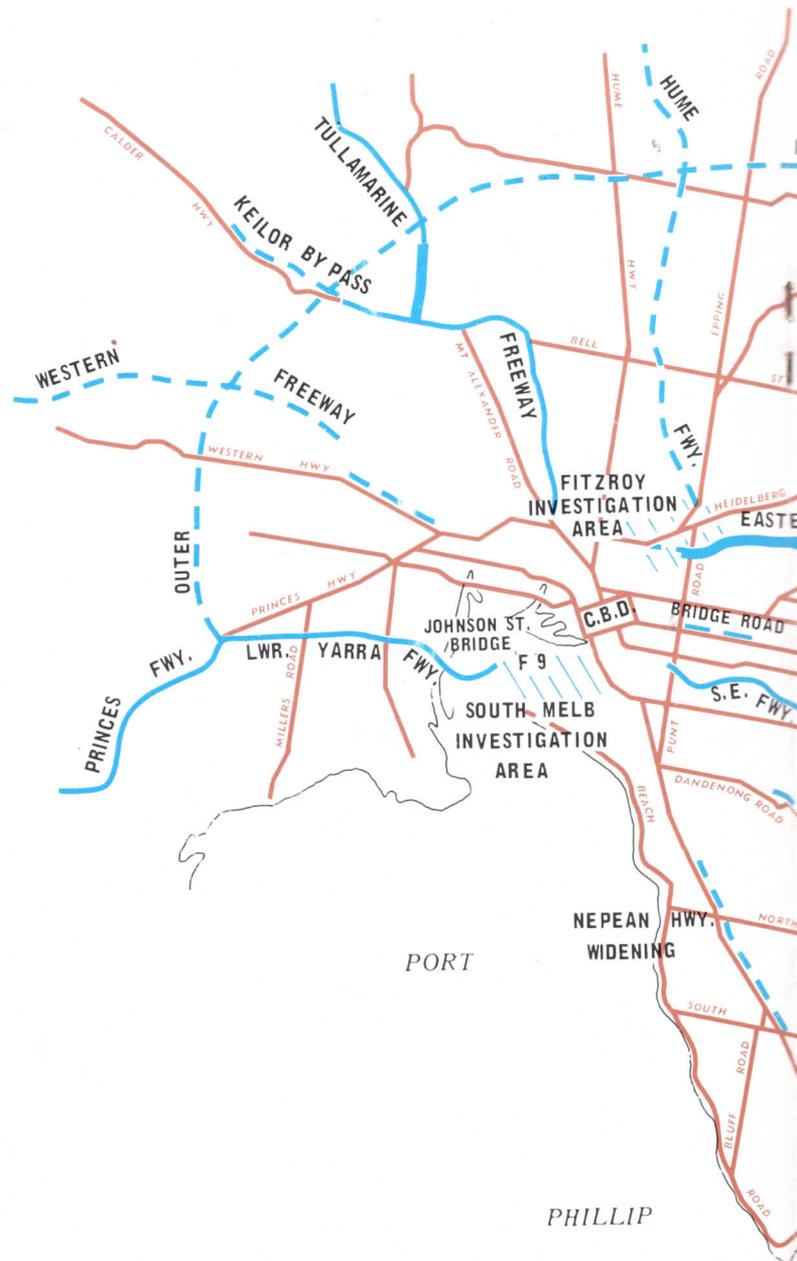
### ● Greensborough Freeway

The Greensborough Freeway, north from Watsonia, will provide a bypass of the Greensborough shopping complex for through traffic and provide access to the developing residential areas around Diamond Creek.

Works currently underway will lower the railway under Watsonia Road and Grimshaw Street, eliminating busy level crossings.

### ● Hume Freeway

Traffic destined for the major inter-capital route — the Hume Highway — from the



#### LEGEND

- EXISTING ROADS
- EXISTING FREEWAYS
- - - PLANNING PROPOSALS
- ▬ FREEWAYS UNDER CONSTRUCTION
- ▨ INVESTIGATION AREAS



metropolis, especially the eastern suburbs, is creating environmental and traffic problems in the inner and northern suburbs. The solution to this is neither simple nor cheap, and the social and technical issues have to be resolved in conjunction with all parties affected.

● **Calder Freeway**

A connection to the Tullamarine Freeway, the Calder Freeway provides free movement in the metropolitan area for through traffic headed towards Bendigo. The Keilor bypass will remove this through traffic from the Keilor commercial centre.

The Calder Freeway also serves both Melton and Sunbury, the two centres nominated for satellite development.

● **Tullamarine Freeway**

Work at Essendon Airport will complete the freeway link from Flemington Road to Melbourne Airport.

● **Western Highway — Braybrook**

The widening of the Western Highway to provide a divided road between Ashley Street and the Princes Highway (Geelong Road) is being investigated.

● **Mornington Peninsula Freeway**

This freeway will provide for the progressive upgrading of access to the Mornington Peninsula and Westernport Bay. The section from the Frankston Freeway at Seaford, to Springvale Road, at Keysborough is under construction.

● **Route E6**

The CRB is currently discussing with Kew Council possible future development of a spur road off the Eastern Freeway following the route of the old outer circle railway reservation.

● **South Eastern Freeway — Mulgrave Freeway Connection**

Following discussions with the municipalities involved on the terminal problems at the western end of the Mulgrave Freeway and the eastern end of the South Eastern Freeway, the CRB sought Government approval to investigate the need for a possible future arterial connection of high capacity between these freeways.

In November, 1976, the Minister of Transport announced the formation of a Committee to investigate a connection in this Malvern Corridor.

● **Healesville Freeway and Dingley Freeway**

Healesville Freeway will extend from Middleborough Road, Blackburn South, and bypass the town of Lilydale, joining the Maroondah Highway north-east of Lilydale. The freeway will relieve traffic congestion along the Maroondah Highway.

The Dingley Freeway will link the Mornington Peninsula Freeway, Moorabbin, with the Outer Ring Road, near Dandenong, and the South Gippsland Freeway, Hampton Park.

The construction of both of these freeways is still some years away.

# ROAD TRANSPORT

## CRB answers some questions

**QUESTION:** What importance is placed on goods transportation in developing road facilities?

**Mr. DONALDSON:** There are two areas involved here, one a question of design, the other of volume.

You could almost say that roads are designed for heavy vehicles. Certainly our attitude to such considerations as lane width, strength of pavement, bridge strength and road gradients would be vastly different if we were designing roads for the average passenger car. We have to design for the heaviest common user, and the needs of that user, and that means heavy transport vehicles and buses.

In terms of volume, we have always differentiated between passenger cars and light and heavy vehicles in all our traffic user studies, including our annual census of traffic on Victorian roads.

For example, it was primarily the needs of goods transport, and the effects it was having on local communities, which led us to adopt the location for the recently completed Wallan to Broadford section of the Hume Freeway. It was the needs of the transport industry that set the priority.

**QUESTION:** Some would argue that much of the freight currently being transported on the roads would be better off on other forms of transport. What is the CRB's view?

**Mr. DONALDSON:** In some areas this may be true but they are only particular cases. One should remember that transporting goods through other transport modes still requires a truck at each end to complete the cycle. Indeed, it is much of this short haul traffic that contributes to the massive 99 percent of the goods transported by roads inside the metropolitan area of Melbourne. A supermarket does not get its deliveries by tram or train.

**QUESTION:** What, then, do road developments and improvements have to offer the transport industry, and the manufacturer with goods to move?



Mr R E V Donaldson

**Mr. DONALDSON:** I do not think that anyone would question the fact that our existing road network in the metropolitan area is inadequate for the volume of traffic using it. There are two ways to remedy the situation — either reduce the traffic volume or provide more and better road facilities.

We believe the latter alternative is the more acceptable for the people at this stage of Melbourne's development, and is the alternative being adopted in most countries around the world, from the USA to Poland.

Better roads in many cases mean strategically located freeways, and in terms of commerce and industry, the advantages freeways have are quite enormous. If the adage of business is 'time is money', then elimination of stop-start travelling, reduction of travel times, lowering the risk of accidents, add up to lower operating costs and a greater capacity to get the goods to the market place.

Before most industries establish new premises or relocate, they discuss with the Board road problems as part of their investigations.

The development of industry at Clayton North is an example of this. Long before the first sod was turned on the Mulgrave Freeway, manufacturers established with us what our plans were and what sort of priority they were given.

As a result, industry went there, particularly food companies who needed to move their products quickly.

It goes back to the very philosophy behind the establishment of the Country Roads Board. It was not so much to provide the farmer with a better road for his own personal use, it was to get his produce to the market.

**QUESTION:** Do you think the transport industry, and industry in general, should be more involved in supporting road development?

**Mr. DONALDSON:** I think it can be said that we have the interests of transport and industry at heart, basically because the market is the public and we are a public body.

But in many cases we have found it a lonely business defending our plans and projects, against minority objection which sometimes is quite irrational. The result has been that major road improvements have become unfashionable, but they are still basic to our social life, unfashionable or not. The Australian Road Federation is one organisation established to promote better roads and we maintain effective liaison with its executives.

**QUESTION:** What are the major problems being faced by the CRB, as the State's Road Authority?

**Mr. DONALDSON:** Basically twofold — lack of money and what appears to be lack of community support for what we see as needed to be done. That is, if the vocal people truly reflect community attitudes, we are very unpopular people. But I for one do not see this as a true reflection as good roads are obviously preferable to bad roads.

Inflation has hit us as it has with any other industry. We cannot do as much with the money available as we did in the past. In the end, the community will have to decide if they are willing to pay the price for adequate road facilities, both for the movement of goods they want, and their personal mobility.

*Report from "Management Review", August, 1976, the monthly bulletin of the Australian Institute of Management—Victoria.*

## PAVEMENT TESTING WITH THE DEFLECTOGRAPH

**New equipment to measure road pavement strength will assist the CRB to estimate the life of road pavement and determine if any repair work should be carried out.**

Last year the CRB purchased a Lacroix Deflectograph (pictured right) that automatically measures deflection of the pavement caused by the passage of heavily loaded vehicles.

The equipment is mounted on a ballasted Berliet GLR 160L truck and as the truck moves forward mechanical arms automatically measure the movement of the road under each of the rear wheels every 3.3 m.

Movement in the pavement is recorded on a M.A.P. — Swiss MH100 recording and control unit, mounted in the cabin of the vehicle.

This equipment is an improvement on the Benkelman Beam method of testing the road pavement which has been in use for some years.

Between 10 km and 15 km of road can be tested under service conditions each day.

The French developed De-

flectograph, which has been in operation in Great Britain, Europe and South Africa for some years, was purchased by the CRB for \$61,000.



### ROAD PUBLICATIONS

The following publications can be obtained from the CRB by filling in the attached coupon and returning it to Public Relations Section, Country Roads Board, 60 Denmark Street, KEW, 3101.

#### CRB

- The Roadbuilders
- Traffic Noise - A Shared Responsibility
- Improving Melbourne's Road System
- Widening of Nepean Highway
- Snow Driving - It's An Art
- Roads With Built-in Safety
- Science in Road Development
- Urban Freeways
- The Hume Challenge
- Orbost (Princes Freeway)
- Back Issues, CRB News

#### NAASRA

- Roads and Traffic Noise
- Roads and Traffic Safety
- Roads and Pollution

Name .....

Organisation .....

Address .....

# Two more

# freeway

# sections opened...

## • South Gippsland Freeway

On Wednesday 8th December, a new four kilometre section of the South Gippsland Freeway was opened to link the Mulgrave Freeway at Dandenong, with the South Gippsland Highway at Hampton Park.

Motorists travelling southerly along the section of new freeway and wishing to proceed towards Cranbourne or Hastings will be able to continue beneath the Pound Road overpass and join the South Gippsland Highway near Dandenong-Hastings Road.

Motorists travelling towards the city from either the direction of Cranbourne or Hastings and wishing to enter the new freeway and the Mulgrave Freeway will be required to travel via the recently constructed highway deviation and the Pound Road interchange. (No entry to the freeway will be permitted opposite Dandenong-Hastings Road.) These traffic movements will operate until the freeway Interchange with the South Gippsland Highway near Abbots Road is completed.

## • Mulgrave Freeway

A two kilometre section of the Mulgrave Freeway between Blackburn Road, Mount Waverley, and Springvale Road, Mulgrave, was opened to traffic on Wednesday, 15th December.

Vacationers heading towards the holiday resorts along the south-east coast — Phillip Island, Inverloch, Waratah Bay and Wilson's Promontory, can now bypass Dandenong by using the Mulgrave Freeway from Blackburn Road, and continue along the South Gippsland Freeway to the South Gippsland Highway, a distance of 20 kilometres of freeway.

## FREEWAY EMERGENCY SERVICE

The first six months of the CRB's emergency service on Melbourne's freeways provided assistance to a total of 2443 motorists.

During this period 1098 motorists needed help for mechanical failure, while 685 motorists ran out of petrol to be in the second highest category.

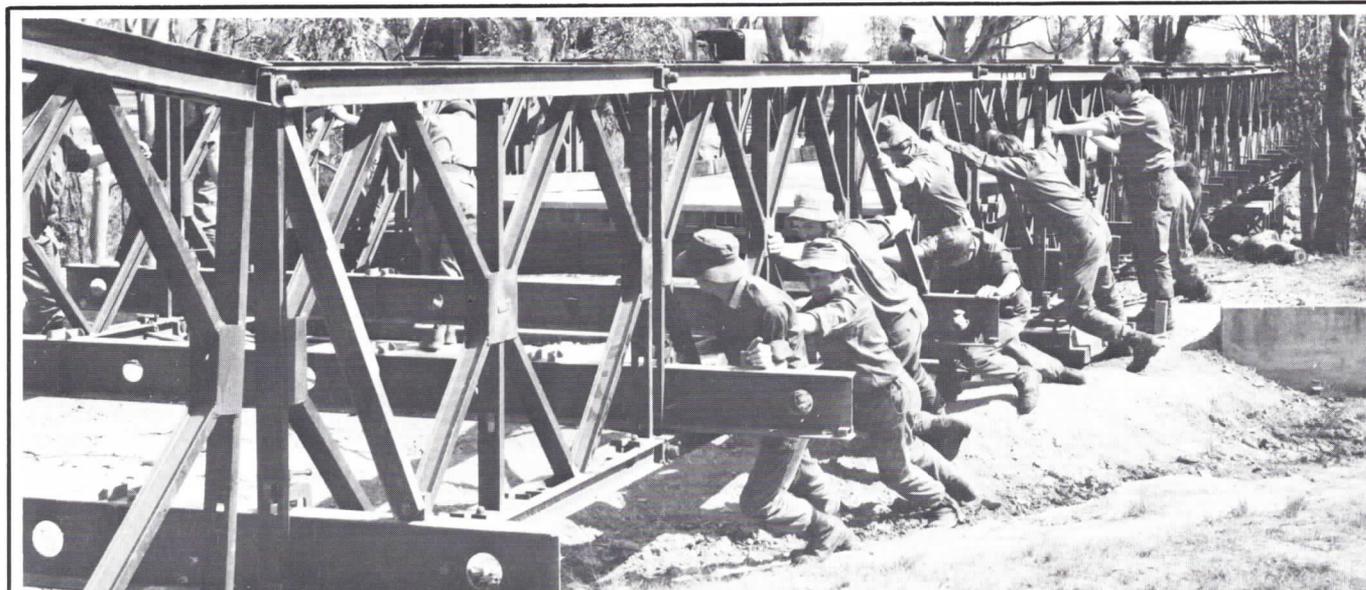
Accidents accounted for only 5.28 percent of calls.

The service operates from emergency telephones on Tullamarine, South Eastern and Lower Yarra Freeways, Kingsway and Queensway under St. Kilda Junction.

The telephones connect to a switchboard at CRB Head Office, which is manned 24 hours a day. Contract towing services are used to assist motorists.

The reasons for calls received during the period May to October were:

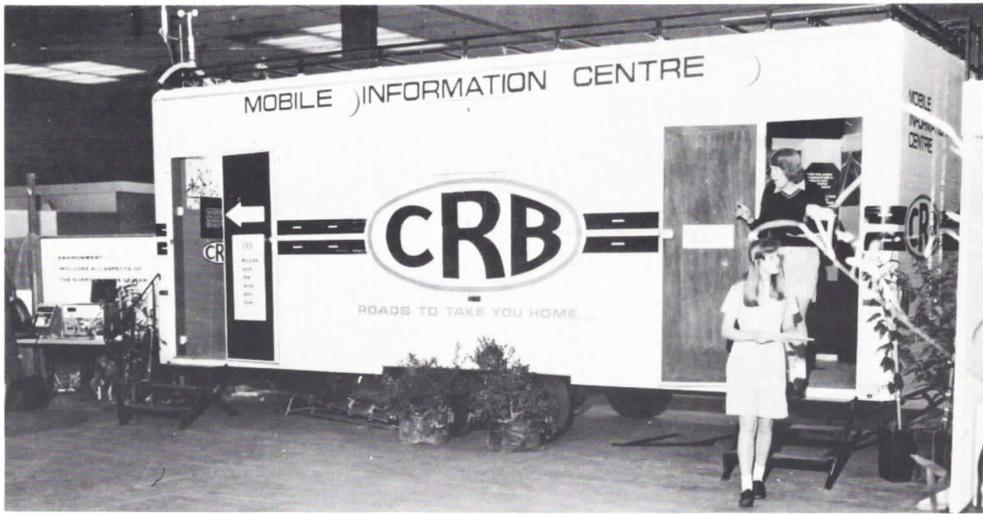
Reason for emergency call	No. of Calls	Percent
Petrol	685	28.04
Tyres	213	8.72
Battery	55	2.25
Radiator	263	10.77
Mechanical	1098	44.94
Accident	129	5.28
	2443	100.00



A BAILEY BRIDGE TAKES SHAPE . . . civilian army reservists from the Country Roads Board, State Rivers and Water Supply Commission and the Melbourne Metropolitan Board of Works at work at Benalla during the annual two-week camp in October for

members of the 22 Construction Regiment. About 300 men were at the camp, which is the only time of the year the civilians train together in weapon handling, bridging techniques and operation of large plant items.

# A show for all places



In September, the CRB took delivery of a caravan especially designed for use as a Mobile Information Centre (MIC) to present to people at shows, exhibitions and functions, details of the CRB's current and future road proposals.

The MIC has an interchangeable display of photographs and an audio-visual unit, and has been used to advantage at the 1976 Royal Show, the Environment '76 exhibition, agricultural shows at Sale, Bairnsdale and Traralgon and also at Orbst prior to the opening of the Snowy River bridge on 25th November, 1976.

(The Mobile Information Centre is pictured here on display at Environment '76 at the Exhibition Buildings.)

## LETTER

Dear Sir,

All these protests against the opening of the Eastern Freeway are totally wrong. Sure, some people will have to move and this must mean some hardship, but to provide safety to the general public is a good policy. I would say my money would be pretty safe to say that 75% of car owners in Collingwood and Fitzroy will travel on the F19 within a year of the official opening. They will then realise that they, themselves, were wrong and that saving lives is more important than moving.

They say that the freeway will destroy parklands and golf courses but these are being rearranged, not destroyed. Besides, it will open up some of the best parkland in Melbourne to people travelling on the F19.

To sum up in my point of view, the Eastern Freeway, like all freeways, will bring people closer together rather than dividing them.

G. Hardy



### ● A summary of major contracts entered into by the CRB from 25th September, 1976, to 5th November, 1976.

Road	Description	Contractor	Amount \$
Hume Freeway (Seymour and Goulburn Shires)	Construction of 12,250 m of single freeway carriageway (excluding pavement and some drainage works) and associated works on the Hume Freeway between Avenel and Tubbs Hill.	Keathson Pty. Ltd., Thomastown.	1,726,091.03
Geelong Division	Supply and delivery to various locations within the Geelong Division of quantities of crushed rock products for the period ending 31st August, 1977.	Geelong Quarries Pty. Ltd., Geelong West and Riordan Quarries Pty. Ltd., Colac (two contracts).	147,250.00
Warrnambool Division	Priming and/or primer-sealing various roads within the Warrnambool Division for a period of one year.	B P Bitumen Spraying Services, Noble Park.	182,710.00
Benalla Division	Supply and delivery to various locations in the Board's Benalla Division of quantities of sealing aggregate for the period ending 30th September, 1977.	Various Suppliers.	287,517.00
Mulgrave Freeway	Manufacture and delivery of 466 No precast reinforced concrete culvert crown units for the culvert at Scotchmans Creek on the Mulgrave Freeway.	Associated Precast Concrete Pty. Ltd., Westall.	342,150.00
Hume Freeway (Violet Town Shire)	Supply and delivery of 40,000 cubic metres of pavement material to the Hume Freeway between Violet Town and Baddaginnie.	Mr. T. Wren, Tungamah.	156,800.00
Hume Freeway (Violet Town Shire)	Supply and delivery of 101,000 cubic metres of crushed rock and 3,100 cubic metres of sealing aggregate to the Hume Freeway, between Violet Town and Baddaginnie.	Adelaide Quarry Industries Ltd., Melbourne.	849,716.00
Western Highway (Sunshine City)	Asphalting of the Western Highway between Deer Park and Rockbank.	Pioneer Asphalts Pty. Ltd.	198,713.80

# Public participation

**It has become widely accepted that community participation is now an essential part of the road planning process in Victoria.**

**But how can the man-in-the-street best "do his bit"? And how important is his opinion? What is the best way to get his views and what is the best way to use them?**

*The Country Roads Board's Chief Planning Engineer, Mr. R. T. Underwood, has made a searching study of the role of the community in road planning and compiled a detailed report entitled "Community Participation in Road Planning" for the Australian Road Research Board's Eighth Conference recently held in Perth.*

In preparing the report, Mr. Underwood studied both local and overseas projects and suggested a series of guidelines for future community involvement programmes.

Community participation has increased significantly in recent years in Victoria, but, Mr. Underwood points out, it should be essentially a two-way information and feedback system.

It must not allow activist groups to take over the role of decision making, nor should it disregard the views of the "little man" who may not have the resources to make his opinions known, but who may also be affected by the proposed planning.

Community participation should not in itself be decision making, but should be used as a tool to assist the appropriate authorities in the decision making.

Mr. Underwood has outlined details of a number of studies involving public participation already completed in Victoria, three of which are described below.

## F6 Corridor Study

The F6 Corridor Study between Warrigal Road, Moorabbin East and Springvale Road, Keysborough was a joint CRB-MMBW study to find acceptable road improvements which disrupt the local community as little as possible but with the greatest benefit to the community as a whole.

The programme included a series of public meetings, and the forming of a citizens committee. Consultants reports were



Mr R T Underwood

made available to the public, there was wide distribution of brochures, Study staff were available to receive comments and suggestions from the general public, and there was frequent contact with the local municipal councils.

**It was discovered that the degree of community interest was directly related to the level of anxiety caused by the possibility of individuals being affected.**

It was also found that such a study should clearly point out its aims, the processes to be followed, what information was required, and how the opinions of the local community would be used.

Also the number of people likely to be affected should be narrowed down as early as possible.

The F6 Corridor study successfully resulted in an acceptable solution being found that satisfied both local and traffic requirements.

## Geelong Study

The Geelong and Environmental and Social Benefits and Costs Study was set up by the Geelong Regional Planning Authority, with financial and technical support from the CRB, to assess three roading alternatives for Geelong.

The consultants sought to involve the local community in their work and to ensure their conclusions reflected the preferences of the people of Geelong.

An active public participation programme was conducted which included the election of a citizens committee, public meetings, displays of maps and commentaries, and the establishment of a consultants office in Geelong where members of the public were encouraged to comment and criticise the proposals.

Two social surveys were also conducted, one a random selection of 300 households, and the other of 1100 households affected by the road improvement schemes.

**The study and its public participation programme was well supported by the people of Geelong.**

Elements that contributed to its success included the obvious effort to involve the public, the fact that there were specific alternatives to the study, that it was completed in a reasonable time (twelve months) and that its findings were readily acceptable to the large majority of those directly affected by one or other of the alternatives.

## Eastern Corridor Study

The Eastern Corridor Study in 1975, was required to examine both short and long term transportation problems in the Ringwood area. It was carried out by a Management Group consisting of representatives of the CRB, MMBW, and Ministries of Transport, Conservation and Planning.

The programme included the issue of information bulletins, meetings with the public and community groups, the establishment of an enquiry office and household surveys.



Community participation and action at Keilor. About 400 people attended a protest meeting voicing concern at the delay in constructing the Keilor bypass section of the Calder Freeway. CRB Assistant Divisional Engineer, Metropolitan, Mr David James points to a scale model of the project. Seated are Keilor Commissioner, Mr K Holland (left) and meeting convenor Mr Rex Webb.

It was found that the study area was too large for the community to appreciate and the various action groups consulted were generally concerned only with the problems that directly affected them. A large majority of the community did not take the opportunity to participate.

It was apparent that definite proposals that people could understand and see the effect on their own interests was necessary to obtain worthwhile participation.

### A say for everyone

If community participation is to be effective, it is essential that all participants should understand its purpose. It is a process of collecting and analysing all the relevant facts, of presenting this information to the community, of obtaining the views and responses of all sections of the community and of using this information in the decision making process.

An individual will accept a decision when it corresponds to his own personal choice. Thus there is an obvious advantage in a decision acceptable to the majority.

Most people realise that some decisions are best made by specially qualified people and the community at large will not query technical decisions provided the results are presented in a clear and logical manner and provided they appear realistic.

Every attempt must be made to obtain as wide a participation as possible. Some people have a greater opportunity to express their views, so the sections of the community that should participate should be defined. One conventional method of obtaining overall community views is by the use of public opinion surveys.

**Every effort should be made to determine all the relevant local issues and also those of a broader regional nature.**

Often, proposals will not be implemented for several years and, in some urban areas, the population is reasonably mobile and those that are consulted at the planning stage may not be affected at the implementation stage.

In such cases the study must be based on anticipated future conditions and not on existing conditions.

As planning studies get under way, it is common for action groups to form to support local issues. The role of the action group is important because they provide additional means by which individuals can make their views known, and by which they can more effectively respond to various issues and proposals.

"Speaking Of ..." will become a regular feature of CRB News, where reprinted or discussion articles will be published on matters directly or indirectly relating to roads and transport in general. They need not necessarily represent the views of the CRB but are published as a matter of interest and discussion.

## Tell the public

But the door of the planning office must be open to all who wish to protest or comment. No one should be excluded from participation.

Also all relevant information must be made readily available to the public as soon as possible.

If there should be good reasons why any information cannot be made public, details of these reasons should be clearly stated.

The public should be told, in clear non-technical terms, the need for the study, the objectives, the general procedures to be followed, details of any alternatives being considered and a broad outline of the evaluation process.

Also the public should be kept informed of details of the favoured solution including reasons as to why it was selected and why the other alternatives were rejected.

**It is also important that all queries from the general public be investigated, and the results made public as soon as possible.**

A successful programme should also be such that planning can be appropriately modified as it proceeds to take into account community comments, views and attitudes. The participation programme must remain a flexible process so that information gained can be included.

The basic requirements of any investigation involving community participation should include the following:

1. Those dealing directly with the public must be able to speak with authority. This requires the use of senior and well experienced personnel who are able to communicate in simple non-technical terms.
2. Queries should be answered promptly.
3. Proposals should be presented in an appropriate form. The general public might find it difficult to appreciate that a detailed engineering drawing is only a preliminary proposal, or one of several alternative proposals.

★ **TOWARDS BETTER ROADS** details progress on improvements by the CRB to the major road network of the State.

The cost estimates used are current as at December, 1976.

Major works currently under construction by the CRB are summarised below.

## **WESTERN HIGHWAY, HORSHAM**

Work is nearing completion on the construction of 1.7 km of divided highway on the southern approach to Horsham.

The work involves the construction of a second bridge across the Wimmera River, re-modelling and widening the existing bridge and the construction of a second carriageway.

Service roads adjacent to the new divided section of the highway are being constructed by the Horsham City Council.

The total cost of the project is in excess of \$1 million. Work on the new bridge was completed in mid-December and work on the bridge approaches is expected to be completed by February, 1977.

## **MORNINGTON PENINSULA FREEWAY**

This work including the bridges across Eel Race Drain was completed in November, 1976, when a two kilometre section of the Mornington Peninsula Freeway, south of Eel Race Drain towards Frankston and linked to the Frankston Freeway, was opened to traffic.

The cost of the section of freeway is estimated at \$1.1 million. Construction is continuing northwards to the Patterson River.

## **PRINCES HIGHWAY EAST, BEACONSFIELD TO OFFICER**

Construction is well advanced on a second carriageway to provide two lanes for traffic in each direction between Beaconsfield and Officer.

Expected completion date is mid 1977 at a cost of \$1.2 million.

## **PRINCES FREEWAY, ORBOST**

Work is continuing to schedule on the freeway bypass of Orbost, which includes three new bridges to carry the Princes Freeway over the Snowy River and its flood plains at Orbost.

Bridges at Ashbys and Watts Gulchs and associated freeway roadworks to the west of Orbost are expected to be completed and opened to traffic in March, 1977.

The final section of freeway to the east of Orbost is expected to be completed and opened to traffic in August, 1977.

The estimated cost of the project is \$9 million.

## **PRINCES HIGHWAY EAST, SIMPSONS CREEK BRIDGE**

Reconstruction and realignment of 3.8 km of the highway at Simpsons Creek has begun.

The work includes the construction of a new three span concrete bridge across Simpsons Creek.

The project is expected to be completed in mid 1977 at a cost of \$650,000.

## **SOUTH GIPPSLAND FREEWAY**

The dual carriageways of the freeway between the Princes Highway East and Pound Road, including the Pound Road interchange, and a single carriageway south to the South Gippsland Highway were opened to traffic on 8th December, 1976.

The whole project will be completed late in 1977 at an estimated cost of \$10 million.

## **GREENSBOROUGH FREEWAY**

Construction of road over rail overpasses is continuing at Watsonia Road and Grimshaw Street, Watsonia, to eliminate these railway level crossings.

The construction of the overpasses is scheduled for completion in early 1978 at a cost of \$5.4 million.

The new overpasses will form part of the future Greensborough Freeway project north from Watsonia, bypassing the Greensborough shopping centre.

## **TULLAMARINE FREEWAY**

The construction of an interchange at English Street, which provides access to Essendon Airport, as a further stage in the upgrading to freeway standard of the Lancefield Road section of the Tullamarine Freeway route has begun.

The upgrading of Lancefield Road is expected to be completed in late 1979 at a cost of \$6 million.

## **BANKSIA STREET, HEIDELBERG**

The widening of Banksia Street and the flaring of the Banksia Street — Lower Heidelberg Road and the Banksia Street — Dora Street intersections is well advanced.

Included in the project is the duplication of Banksia Street from Cape Street to Banksia Street bridge across the Yarra River.

Work on the Banksia Street — Lower Heidelberg Road intersection is scheduled for completion by Christmas 1976, and the Banksia Street — Dora Street intersection in mid 1977. The project is estimated to cost \$1.2 million.

## **McINTYRE ROAD, SUNSHINE**

Construction of a road over rail overpass on McIntyre Road, Sunshine is now completed at a cost of \$1.5 million.

## **CAMP ROAD, BROADMEADOWS**

Construction of a road over rail overpass at Camp Road is continuing and when completed, will eliminate an existing railway level crossing and carry Camp Road over Pascoe Vale Road.

Bridge construction and the placing of earthworks for the new road approaches has started.

Traffic is using a side-track and temporary level crossing in Camp Road during the construction of the overpass.

The project is scheduled for completion in late 1978 at an estimated cost of \$3.8 million.

## **PRINCES HIGHWAY, DROUIN AND WARRAGUL SECTIONS**

Works have commenced on the construction of the Princes Freeway which, when completed, will provide a bypass of the towns of Drouin and Warragul.

The current work involves the duplication of two kilometres of the existing Princes Highway as part of a future freeway interchange two kilometres east of Drouin.

The project is estimated to cost \$31 million.

## **FREEWAY F9 SOUTH MELBOURNE**

Design of the freeway and a geological survey of the proposed freeway route between the Lower Yarra Freeway and Grant Street, South Melbourne, are continuing.

An environment study has begun which will incorporate information derived from an extensive traffic survey carried out in February and March of this year.

The current estimated cost of the freeway is \$80 million but construction is dependent on the availability of finance.

## **WESTERN FREEWAY, BALLAN SECTION**

The CRB is continuing with the construction of 8.4 km of freeway bypassing the township of Ballan.

Earthworks are in progress and are expected to be completed by early 1977. Twin freeway bridges over the Werribee River are nearing completion and construction of road overpass bridges at three locations has begun. Materials for the pavement of the freeway are being crushed and stockpiled.

The project is estimated to cost \$8.2 million and expected to be completed in mid 1978.

## **EASTERN FREEWAY, COLLINGWOOD TO DONCASTER**

Bridgeworks on the Eastern Freeway between Collingwood and Bulleen are progressing at the Boulevard, Bulleen Road, the Chandler Highway interchange and over the Yarra River and Merri Creek.

Landscaping work is well advanced, particularly in the vicinity of the Yarra Bend Park.

The section of freeway between Collingwood and Bulleen is scheduled for completion late in 1977, at an estimated cost of \$87 million.

Further to the east, design is proceeding on extending the Eastern Freeway to Doncaster Road, near High Street, Doncaster.

## **MULGRAVE FREEWAY**

A further freeway section westerly from Springvale Road to Blackburn Road was opened to traffic on Wednesday, 15th December.

The remainder of the section under construction to Forster Road is expected to be open to traffic early next year.

Widening of Forster Road and improvements to the inter-sections of Forster Road with Ferntree Gully Road and Waverley Road are being carried out in conjunction with Waverley Council, to allow the use of Forster Road as a temporary terminal.

A new pedestrian overpass across the freeway one kilometre east of Springvale Road was opened during October. This bridge will provide alternative access for local school children who previously had to cross the interchange area at Springvale Road or be taken to school by car.

The estimated cost of the Mulgrave Freeway between Springvale Road and Forster Road is \$13 million.

## **BELLARINE HIGHWAY, WALLINGTON**

Duplication is progressing on 2.7 km of the Bellarine Highway between Bawtree Road, east of Leopold, and the Wallington-Ocean Grove Road.

A large culvert at Fenwick Gully is being replaced as part of the project, which is expected to be completed late in 1977 at a cost of \$670,000.

## **LODDON VALLEY HIGHWAY, BENDIGO**

The duplication of 1.4 km of the Loddon Valley Highway between Havilah Road and Sheri-

dan Street, is nearing completion.

The work includes the widening of culverts across Long Gully Creek, removal of the disused tram track and construction of an 80 km long concrete retaining wall.

The work is estimated to cost \$550,000 and will be completed in early 1977.

## **JOHNSON STREET BRIDGE, SOUTH MELBOURNE**

Work is progressing on the Johnson Street Bridge, which will provide an alternative to the Spencer Street bridge route over the Yarra River.

Foundation work in the river and casting of the bridge deck across the first span on the southern approaches have begun.

Roadworks at Lorimer Street, South Melbourne, have been completed to provide a divided roadway. Roadworks are continuing in the vicinity of Footscray Road, Melbourne, and towards Montague Street, South Melbourne.

The project is expected to be completed late in 1977 at an estimated cost of \$32 million.

## **HUME HIGHWAY/ FREEWAY**

Duplication of the highway from north of Avenel to south of Tubbs Hill has begun. A contract has been let to Keathson Pty. Ltd. for earthworks and some drainage construction, for completion early in 1978. This section is estimated to cost \$7.5 million.

Construction is expected to begin on the Seymour and Avenel Bypass sections this financial year at an estimated cost of \$35 million. Tenders have been called for crushing and stockpiling of pavement materials for Avenel Bypass and Avenel to Tubbs Hill sections.

Construction is well advanced on the duplication of the highway between Violet Town and Badginnie, with earthworks and drainage substantially completed. Completion is expected in mid 1977, at an estimated cost of \$4.5 million.



A two kilometre section of the Mulgrave Freeway, between Springvale Road and Blackburn Road was opened to traffic on 15th December, 1976.

CRB Engineers discuss the progress of the works prior to opening. Pictured are (from left) Site Engineers Colin Roy and Rex Atkins, and Project Engineer Don Durant.