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Transport Workers' Union (Victorian/Tasmanian Branch)

Inquiry into Improving Safety at Level Crossings



October 2007

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>> Introduction

The Transport Workers' Union (Victorian/Tasmanian Branch) (hereafter "the Union" or "TWU") welcomes the opportunity to provide a written submission in response to the inquiry into *Improving Safety at Level Crossings*.

Level crossings are where road and rail infrastructure meet. Collisions between trains and trucks and/or motor vehicles typically result in enormous damage and loss of life. Collisions involving trains, fully laden with freight and/or fuel, can be disastrous. Apart from the tragic human toll caused by level crossing accidents, there is a massive economic cost associated with property loss and damage. The recent Kerang tragedy, one of Australia's worst rail accidents where 11 people died and 14 were injured, highlights the devastating loss that can result from such an accident and the need to continually reassess the safety of level crossings around Victoria.

The need for a coordinated and targeted communication campaign cannot be understated. Pedestrians and motorists continue to brazenly disregard warning systems to scoot across railway crossings in front of oncoming trains. These "bad apples", motorists and truck drivers who may be doing the wrong thing, underscore the need for a targeted education campaign about the safety risks associated with level crossings.

While a public education campaign is needed, there is a much broader problem with the nation's road and rail infrastructure. The transport industry is growing at a pace that is outstripping the growth of the general economy. This growth in the transport and logistics sector will translate into increased capacity on our roads, ports and railways. In this context, it is important to understand the capacity and constraints of the current road and rail crossing infrastructure in Victoria. The growth in the freight task has also created a corresponding fear that the spate of level crossing collisions will rise with an increasing number of truck and rail movements.

The key issues addressed in this submission include:

- Facilitating communication between trucks and trains;
- The need for a comprehensive analysis of level crossings on the Victorian rail network to determine priorities for infrastructure upgrades;
- Better signage and warning systems need to be implemented, including a transponder placed in the train to set off upcoming signals and rumble strips placed on the road preceding the crossing;
- The need for a further targeted campaign to be undertaken to educate drivers, in particular heavy vehicle drivers utilising the Union's Healthbreak program; and
- The need to make trains more visible.

>> The TWU

The Union is an organisation registered under Schedule 1B of the *Workplace Relations Act 1996* (Cth). The Victorian/Tasmanian Branch of the Union has approximately 22,000 members. TWU members are engaged in road transport, bulk and retail milk, oil and gas industries, armoured cars, airports, waste industry, log carting, bus and taxi driving, furniture removal and the waste industry. The metropolitan and regional road system is the workplace for a significant number of our members.

The Union dedicates considerable resources to member representation. From an industrial perspective this occurs through the representation of members in their dealings with the organisations or persons for whom they work, the handling of industrial disputes and the conduct of negotiations for agreements. The Union and its officials have developed a detailed understanding of, not only the work performed by its members, but the multitude of issues which they confront in the conduct of their work. Safety is one of the significant issues impacting on the work of our members. The Union has therefore become a vocal campaigner for safer workplaces, trucks, roads and road infrastructure.

>> Transport & Safety

The growth in the freight industry has outstripped growth of the general economy. It is predicted that road freight will increase from 20 per cent of Australian freight transport in 1971 to 51 per cent in 2015.¹ It is also predicted that freight movements at the Melbourne Waterfront will double, airfreight will triple in the next 5 to 8 years and the bus industry will increase by 20 per cent. Freight and logistics in Victoria contributes \$16.7 billion to the national economy

The movement of some container freight onto rail, while to some extent addressing the major constraints on the road networks, will place further pressure on rail infrastructure.

Table 1

Total Domestic Freight 2004 – 2005

	Road	Rail
Tonnes Carried ('000)	1 756 000	635 000
Tonne-km (million)	164 394	182 990
Average Distance (km)	94	288

Source: ABS, 2005 Survey of Motor Vehicle Use (9208.0)

The enormous growth forecast in the transport and logistics sectors will translate into increased traffic on the nation's road and rail networks. Long-term growth in traffic, both freight and commuter, will necessitate that roads, ports and railways cope with this increased capacity. In this context, it is important to understand the capacity and constraints of the current road and rail crossing infrastructure in Victoria. Despite the difficulty in accurately forecasting future demand for road and rail, a long-term vision and strategy is required to ensure that the infrastructure capacity keeps pace with economic growth and increases in traffic volumes. To deal with capacity constraints, trucks are getting bigger, longer and heavier, and as a result making any collision at a level crossing potentially disastrous.

¹ Bureau of Transport and Communications Economics

Table 2 illustrates that Victoria has a significant proportion of the nations level crossing accidents in Australia.

Table 2

Level Crossing Occurrences

Collision with road vehicle (Counts)		Qld	NT	SA	WA	Vic	Tas	NSW	Australia
2001	Jan-June	8	0	8	1	25	1	9	52
	July-Dec	14	0	9	0	9	0	6	32
2002	Jan-June	9	0	5	5	18	1	11	49
	July-Dec	12	1	6	0	16	2	6	43
2003	Jan-July	11	0	4	2	10	2	2	31
	July-Dec	9	0	7	1	27	1	5	50
2004	Jan-June	2	1	6	1	22	1	4	37
	July-Dec	11	0	5	1	7	2	7	33
2005	Jan-June	13	0	3	2	11	3	4	36
	July-Dec	7	0	5	4	15	2	2	35
2006	Jan-June	9	0	3	1	13	3	8	37
	July-Dec	15	2	7	3	14	2	2	45

Source: Australian Transport Safety Bureau, Australian Government, www.atsb.gov.au

>> Road and Rail Infrastructure

As already stated, it is estimated that the freight task will double over the next two decades. This enormous growth in freight movements requires transport industry stakeholders to consider infrastructure capacities and deficiencies, in particular on our roads and rail networks. While level crossing collisions are often due to failures of attention or misjudgement by an individual, there is a much broader problem with our road and rail infrastructure.

Table 3

Rail Activity Data

Total Train kilometres (millions)		Victoria
2001	Jan-June	18.509
	July-Dec	18.322
2002	Jan-June	18.661
	July-Dec	19.243
2003	Jan-July	18.711
	July-Dec	19.078
2004	Jan-June	18.813
	July-Dec	18.977
2005	Jan-June	19.090
	July-Dec	19.090
2006	Jan-June	19.090
	July-Dec	19.090

Source: Australian Transport Safety Bureau, Australian Government, www.atsb.gov.au

Table 4

Rail Statistics

	2002-03	2003-04	2004-05
Passenger journeys (million)	602.7	610.1	616.3
Passenger km (billion)	11.1	11.5	11.2
Freight tonnes (million)	576.0	594.7	635.0
Freight tonne-km (billion)	158.1	168.1	183.0
Employees	42 258	n/a	44 100
Annual turnover (\$billion)	8.71	n/a	11.19

Source: Australasian Railway Association, Industry Report 2005

There are 9,000 level crossings in Australia, of which around 6,000 are passive, that is, they have no active protection such as warnings bells, lights of boom gates. There is concern within the transport industry that some of the passive railway crossings, predominately situated in rural and regional areas, do not provide truck drivers enough time to cross safely, placing trucks and trains at needless risk.

The main components of Victoria's road infrastructure network include approximately 200,000 kilometres of roads (from major arterial roads to minor local roads, to forest tracks) and 22,300 kilometres of freeways and arterial roads managed by VicRoads are valued at around \$17 billion.² This road infrastructure carries more than 30 billion tonne-kilometres of freight and 50 billion vehicle-kilometres of travel per annum. Almost all goods in the metropolitan area and more than 80 per cent of goods in country Victoria are carried by road. Much of the \$190 billion Victorian economy depends on the efficient and effective management of this vital road resource, in particular the transport and logistics industries. Safe and efficient freight routes and links are essential to reduce the costs of transport.

² VicRoads, The Freight Task in Victoria, November 2002

Victoria's Road Network

The management, maintenance and development of the declared road (Freeway and Arterial Road) and Municipal Road components of Victoria's road network is shared between VicRoads and Local Government (municipal councils). Funding comes from Federal, State and Local Government sources.

Road Classification	Declared Roads (874 roads, 22,280 km) (Arterial Roads)				Municipal Roads (134,200 km)
	Freeways & Arterial Roads (Highway) (64 roads, 7,610 km)			Arterial Roads (other) (810 roads)	Municipal Roads (all other roads open for general traffic)
	National Highways (NH) (Includes 4 roads & 2 road sections – also declared as Arterial Road (Highway))	Roads of National Importance (RONI) (Includes 1 road & 1 road section – also declared as Arterial Road (Highway))	Arterial Road (Highway) (59 roads)		
Total Length (Km) 156,500 ** Roads open for general traffic.	1,030	585 *	5,995	14,670	134,200
Management Responsibility (Maintenance and Permanent works)	State Government (VicRoads) However, note that Local Government (municipal Councils) are generally responsible for management and maintenance of the local components of the roads in urban areas such as the roadside, service roads, parking, footpaths, as assigned under the Road Management Act 2004.				Local Government (Councils)
Funding Source	Federal 100%	Federal	Federal Accident Blackspot Program		Local Government
			State Government Funding (Includes untied Federal Grants)		Better Roads State Impacted Local Roads (incl. Timber Roads)
			Better Roads Victoria Program		

Note:

- The above values and responsibilities are indicative only and may change from time to time. Road lengths and numbers of roads will change as the declared and municipal road networks are developed (new roads, changes in road classification etc).
- * The quoted value of 585 kilometres of Roads of National Importance (RONI) excludes proposed RONI that are not yet declared or opened to traffic (approx 60 km).
- ** This figure was supplied for use in the 2003 Australian Year Book. The total length value of 156,500 km of roads in Victoria that are open for general traffic, excludes in excess of 40,000 km of roads in areas such as parks and forests which come under the responsibility of organisations such as the Department of Sustainability & Environment, Parks Victoria and Water Catchment Authorities. The value of 156,500 includes VicRoads declared roads as at June 2004 and the municipal roads as at June 2001.
- This page was last updated June 2004.

Source: VicRoads, <http://www.vicroads.vic.gov.au/Home/RoadsAndProjects/RoadNetwork/>

Victoria is positioned geographically to act as a “hub” to attract freight from South Australia, New South Wales and Tasmania for export and to act as a distribution centre for international imports.³ The freight corridors in Victoria facilitate the movement of freight from interstate to and from Victoria's ports and industries.

³ VicRoads, The Freight Task in Victoria, November 2002

>> Recommendations

There is no simple solution to improving safety at level crossings in Victoria. Given the huge economic cost of implementing grade separation at individual level crossings, complimentary measures are needed to ensure that accident risk is reduced. The Union believes that the Victorian Government should give consideration to the following recommendations and measures.

The need for a comprehensive analysis of level crossings on the Victorian rail network to determine priorities for infrastructure upgrades, with priority given to rail crossing blackspots. Early identification of safety issues at level crossings will ensure that measures are implemented to mitigate risk. Massive undertaking to upgrade key level crossing and those identified as blackspots to include easily visible warning signs, rumble strips, warning lights and bells.

Better signage and warning systems need to be implemented, including a transponder placed in the train to set off upcoming signals and rumble strips placed on the road preceding the crossing. Level crossing signage and sighting must not be found to be deficient. Trains can often appear to be moving very slowly, when in fact it is moving very fast, faster than your car or truck. The physics involved in stopping a train in an emergency is largely unknown. Even where an emergency brake is applied, avoiding action is difficult where a train may take up to two kilometres to stop.

Communication between trucks and trains could be facilitated, not unlike the Burnely tunnel where City Link have the ability to intercept the radio frequency to make an announcement, therefore allowing the train driver to warn of his/her approach to the level crossing. Voice communication between the train driver and truck driver could also occur using the UHF radio operational in the majority of trucks and trains. There may also be an opportunity to utilise GPS technology to assist in the warning process.

The need for a further targeted campaign to be undertaken to educate drivers, in particular heavy vehicle drivers utilising the Union's Healthbreak program. Behavioural change is required and this could be engendered through the Healthbreak program. The promotion of safe driving and re-educating the public of their obligation to observe the road rules is essential to rail crossing safety. Healthbreak could also be used to promote the issues of fatigue and rostering in both the rail and road transport industries, along with the broader general public.

The need to make trains more visible. Train conspicuity may be a contributing factor in level crossing accidents. Ensuring that road users can clearly see approaching trains will reduce accident risk, particularly at passive level crossings where there is little or no active protection. Improvements to train visibility could include the fitting additional lighting, for example oscillating lights on the front of the train, and the use of reflective strips or paint to ensure that visibility is maximised.

>> Conclusion

Level crossings are where road and rail infrastructure meet. Collisions that occur between trains and trucks and/or motor vehicles generally result in enormous damage and loss of life. There is a massive economic cost associated with property loss and damage, not to mention the devastating human cost as evidenced at Kerrang. There is a need to reassess the safety of level crossings around Victoria in a systematic and strategic manner.

The fear that level crossing collisions will exacerbate with the growing number of trucks on our roads is fuelled by data that suggests the freight task will double over the next two decades. The need for a coordinated and targeted communication campaign to educate those pedestrian and motorists is critical. There continues to be brazen disregard for warning systems at railway crossings around Victoria. While education is critical, funding to assess and improve road and rail infrastructure will significantly reduce accident risk at level crossings.

There is no simple solution to improving safety at level crossings in Victoria, however, a funding commitment from the Victorian Government is critical to ensure that measures are implemented which will reduce accident risk.



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Subject Inquiry into Improving safety at level Crossings

Please find attached a submission by the TWU (Vic/Tas Branch) into Safety at Level Crossings.
Regards,
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