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Dear Bob

New Zealand Traffic Institute (TRAFINZ): Submission on the Draft Level Crossing Guideline.

The NZ Traffic Institute (Trafinz) welcomes the opportunity to provide a submission on the recently released Draft Level Crossing Guideline

Trafinz represents a wide grouping of NZ local authorities covering the majority of the New Zealand population. Its membership includes regional councils, the major metropolitan cities and smaller provincial authorities. The Institute's Executive is comprised of elected councillors and officers drawn from a cross section of the local government membership, together with senior personnel representing its key government agency partners, including the Police, and a number of senior technical staff from transport consultancies that volunteer their services *pro bono*. The Institute's primary focus is on transportation planning, traffic management, and road safety. It provides specialist advice to members on transport/traffic and safety issues, by drawing on the depth of expertise available through its members and particularly its national technical committee. The Institute also acts as a conduit for local authorities to respond to the NZ Government on new transport and safety policies and on proposed new and/or amended legislation.

Overview

Trafinz has a strong interest in rail safety as part of its wider interest in transport safety in New Zealand, and we recognize the important role that rail plays in the wider community and national economy. It is essential that people encountering the rail system as motorists, pedestrians, cyclists, bus passengers etc, enjoy the highest possible level of safety. However the reality of the situation at rail crossings is currently a serious national issue.

Considering the wider national picture, the data on reported rail crashes paints a disturbing picture. The results are especially poor when one considers that the NZ rail system is not especially extensive, operates at low speeds by overseas comparisons, and has light traffic loadings. Coupled with long standing safety problems on at-grade crossings and along poorly secured rail corridors, we believe that the issue of rail safety needs to be addressed with a greater level of urgency.

Trafinz believes that rail safety in respect of at grade road crossings compares poorly when assessed against the five national land transport criteria as detailed in the Land Transport Management Act 2003 as follows:

- Assisting economic development
- Assisting safety and personal security
- Improving access and mobility
- Protecting and promoting public health
- Ensuring environmental sustainability

Looking ahead to the future, rail transport, can be expected to have an increasingly important role in NZ communities as the country seeks to improve energy efficiency and long term sustainability. Consequently we believe that it is important that the safety of the rail system which is currently poor by international comparisons is given an appropriate level of priority in the wider national picture and in the allocation of the financial and technical resources available.

It is important to remind ourselves that the conflict areas which give rise to accidents are well known to the rail controlling authority, but that insufficient attention and funding has been paid to remedying them in recent years.

While Trafanz supports the publication of the Draft Level Crossing Guideline as a logical component of the NZ Manual for Traffic Control Devices, the guideline needs to be seen as part of the wider context of a rail safety regime which is very poor by international comparisons. The guideline needs to be supported by a *vision* for delivering improved safety to railways staff, rail users and the communities that rail impacts on, through collaboration between the various stakeholders, including in particular the local communities affected. Such a vision would require establishing a mindset among all the parties, that the current levels of safety are unacceptable and that it is the responsibility of all the participants to work together to achieve the targets, which have been agreed to by these parties. This would align with a wider *public health* concept for transport safety, which should be built into government policy. This concept has been adopted in Sweden and in other European countries.

Trafanz recommends that a methodical process be instituted at the national level to facilitate the improvements to rail safety. This would be targeted to those types of accident and those locations, which will provide the highest probability of community accident, cost savings.

Many rail related accidents are highly responsive to technical solutions such as improved technology and infrastructure. We note that, by international comparisons, against similar networks, New Zealand compares poorly (e.g. Czech Republic, Queensland, Denmark) and reflect a historically poor NZ attitude to safety and a lack of commitment which can and should be addressed.

Without being unduly critical, Trafanz member authorities have frequently found in the past, that when they seek improvements or maintenance works at existing level crossings, it has been difficult to raise interest or achieve action from the rail track owner. Trafanz would hope to see greater responsiveness and co-operation in the future from On-Track than was the case previously and makes the point that having excellent guidelines although important, also requires all the parties to work co-operatively to achieve and maintain to the standards laid down in the Guideline.

Trafanz is concerned with regard the position of central government agencies on the funding of major rail safety solutions (e.g. grade separation). These government

agencies appear to view funding of grade separation as essentially a matter for the road controlling authorities and LTNZ. They argue that the need for grade separation is driven by increased road traffic delays and not by rail-related safety and operations.

There is a good argument to support a more pro-active contribution from central government in the case of Auckland for example, where double tracking is currently taking place. This track layout significantly increases the risk of an incident at a level crossing, as it enables trains to operate in both directions and accommodates an increased frequency of service. In addition, the distance over the crossing itself and hence the time taken to cross it usually increases. The need for grade separation is therefore influenced by changes to rail operations and the rail corridor and is not solely road traffic related.

Without allowance for satisfactory resolution of funding for major rail level crossing safety solutions, such as grade separation, major costs continue to lie with the affected territorial authorities. This may result in the opportunity to grade separate prior to the electrification of the Auckland rail system being lost. This is not to say that territorial authorities should not meet those costs which clearly lie within their road controlling responsibilities. However, territorial authorities do not have the funding resource to make extensive provision for grade separation within their current LTCCPs. Trafanz therefore proposes that Central Government (including LTNZ) need to take a much more pro-active and fundamental look at the funding of safety improvements to rail level crossings, which the draft guidelines on rail level crossings do not adequately address.

Trafanz notes that the government's approach to rail crossing management is quite different to the way State Highways are managed by Transit New Zealand. Where severance of communities may be at risk or where connectivity needs to be improved, Transit as the state highway agency considers these matters as part of its state highway responsibilities. Trafanz believes that the rail network manager should take the same approach.

In this regard, the matter of funding is particularly important and Trafanz suggests that funding should be made available through Land Transport NZ at the 100% level, and not place any further financial burden on local government. That is, the rail track owner would have the same funding status as Transit and that local authority roading costs are included in this funding.

Trafanz believes that through constructive cooperation between key stakeholders including adjacent landowners, regional, city and district councils, MOT, ACC, Land Transport NZ, Police, etc, it should be possible to achieve significant improvements to rail crossing safety in line with the national safety targets for 2010.

Trafanz will be happy to collaborate in assisting the process of achieving a significant improvement to rail crossing safety and is able to volunteer high level technical expertise drawn from its member local authorities and supporting consultancies who provide technical expertise to the Institute. This includes rail engineering expertise.

Draft Guideline:

In regard to the Draft Level Crossing Guideline, Trafinz welcomes the decision to produce a New Zealand Manual for Traffic Control Devices of which the level crossing guideline is Volume 9.

The guideline has been produced to a high standard. It covers in detail all aspects of level crossings from crossing types, legal and procedural matters, through planning, design and maintenance standards and responsibilities. When finalised and formally adopted it will provide a useful reference document for all parties involved in rail crossings including road controlling authorities, private landowners, rail owners/operators and utilities.

Although the guideline should be seen as a useful collation of NZ practice in regard to rail crossings, because the country's rail crossing safety outcomes are currently poor by best international standards, then it will be essential that as a matter of urgency every effort is made to upgrade all deficient crossings and to adopt best practice design standards from other countries where these can be shown to be superior to the NZ designs. It is likely that improved technology in regard to warning systems, site specific information and signage will offer high potential for safety improvements and where available should be introduced without delay.

Trafinz has a number of specific suggestions to improve the Guideline as follows:

1. There appears to be an anomaly between the "Context for Public Comments" Page 3 where there is a listing of the various volumes which will comprise the Manual for Traffic Control Devices, and Page iii of the Draft Guideline which has a similar list but has a different numbering of the proposed parts of the Manual.
2. It is noted that under Part 5 - Road marking, and Part 7- Road Surface Geometry and Surfacing, there is reference to which organisation has responsibility for these aspects of level crossings. In order to eliminate any doubt, it would also be useful to reiterate who has responsibility for provision and upkeep under Part 9 - Requirements for Pedestrian and Cycle Crossings and Part 10 - Requirements for Public Vehicle Crossings.
3. In regard to Part 3 Risk Assessment, Trafinz believes more work is needed to confirm the applicability of the Australian ALCAM assessment model to the New Zealand situation due to some significant differences between the two countries in terms of rail system design and operation.
4. Although there is a presumption in law that rail takes precedence over road at level crossing sites, Trafinz suggests that where a rail contractor is carrying out works at a level crossing, then they should be required to comply with normal council roadworks notification procedures. This is because in most instances the road traffic at the crossing substantially dominates the rail traffic in terms of numbers, and for a road controlling authority crossings are an anomaly in regard to the RCA's ability to monitor and oversee its road network.
5. Pedestrian mazes - it is encouraging to see the pedestrian mazes are designed to cater for wheelchair and mobility scooter traffic, however, alternative design

(still wheelchair and mobility scooter traffic friendly) should be provided for locations where footpath space is insufficient to accommodate a standard maze design.

6. Tactile ground surface indicators - tactile ground surface indicators should be installed (in accordance with RTS 14) at all level crossing points, in conjunction with other safety measures - such as audible signals, flashing lights etc. This will reinforce the level crossing and safety issues associated to ensure the level crossing points are highlighted for pedestrians and cyclists as well as convey important cues to blind and vision - impaired users. Furthermore pram crossings will be required if the level crossing is not flush with the footpath level.
7. Additional crossing facilities - additional facilities at locations near schools or high pedestrian / activity generators or locations with high number of young children or elderly pedestrians should be assessed regularly by Ontrack to ensure appropriate level of protection is being provided to these users. This may require grade separated crossing facilities instead of having these pedestrians crossing railway tracks.
8. Key design principles - simple, logical and consistent layouts should be adopted. For example:
 - pedestrian crossings should be located in the direct line of the continuous accessible travel path to maintain the connectivity of pedestrians
 - kerbs to be aligned so they are crossed perpendicular to the path of travel
 - the distance of crossings should be as short as practicable
 - sufficient warning should be provided to pedestrians to indicate the direction of travel of the approaching train, especially if there are crossings with multi tracks
9. It should be required by Ontrack together with other key agencies that any safety deficiencies that are identified through an ALCAM assessment must be implemented prior to the railway lines being able to operate. This is no different to a state highway or capital works project that requires a stringent safety audit process to ensure identified deficiencies are mitigated.

TRAFINZ is happy to discuss any of the comments contained in the submission and any queries can be directed to the Chair of the TRAFINZ Technical Committee, Steve Spence, Chief Transportation Engineer, Wellington City Council (☎ (04) 803 8099 / Email: steve.spence@wcc.govt.nz)

Yours sincerely

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