

## **Safely Integrating Public Transport within the Road Environment**

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### **Abstract**

With increasing urban congestion there is renewed focus on public transport. Public transport networks may directly integrate with the road environment, such as bus or light rail networks, or may be segregated but provide high-demand interchanges, such as Metro rail.

Through good design and practice we can ensure these networks and interchanges provide safe access and thoroughfare for all road users – making sure we proactively create safe places for people that align with our Towards Zero vision.

This paper outlines how a collaborative safe system approach has been achieved to ensure safe integration during construction and operation of transport projects.

### **Background**

With increasing congestion in our cities there is a renewed focus on public transport to reduce reliance on cars, increase the place function of the environment, and provide customers with options to move about the network. In NSW there are currently a number of public transport infrastructure projects being designed and constructed, including light rail, rapid bus corridors and Metro rail. These projects either directly integrate with the existing road network through on-street running, or interface with the network through high-demand interchanges.

Introducing new public transport such as light rail into urban areas can introduce new safety risks, particularly for vulnerable road users. Through good design and practice we can ensure these networks are safely integrated into the existing environment and provide safe access and thoroughfare for all road users – making sure we proactively create safe places for people and not future blackspots.

### **Collaborative Approach**

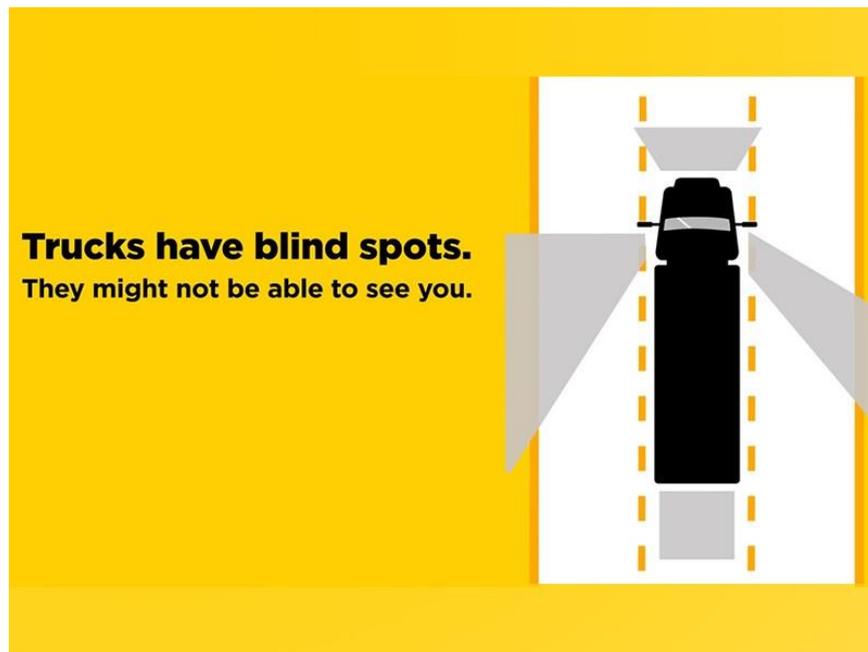
The Centre for Road Safety has been working closely with each of the projects to ensure safety is a core focus. Road safety audits are mainstreamed into all new projects at the design, planning and construction phases.

### **Construction**

The underground nature of Metro rail involves significant tunneling and subsequent heavy vehicle movements to remove spoil and deliver construction materials. To ensure this is carried out safely we have collaborated with the projects to ensure a safe system is maintained.

Minimum heavy vehicle safety requirements have been improved to create safer interactions with other road users. Additional training has been provided to heavy vehicle drivers and successful campaigns rolled out to remind other road users of trucks' increased blind spots and reinforce that safety is a shared responsibility (Figure 1). Appropriate speed limits have been implemented at construction sites, along with enforcement measures and infrastructure improvements to control

risks associated with introducing significant heavy vehicle traffic in existing urban road environments.



*Figure 1. Example of successful truck blind spot campaign*

## Challenges

For projects that are introducing new modes of transport into NSW, the biggest challenge from a roads perspective is designing for future safe integration within the existing network. This involves a thorough understanding of future land use across the networks and clear goals for the movement and place function of the environments. Speed limits need to be appropriate for the surrounding environment, with lower speed limits in areas of high pedestrian demand and interchange, or frequent major events. In corridors identified as predominantly movement corridors, higher speed limits can be achieved when coupled with appropriate infrastructure such as kerb separation and controlled crossing points. Transport vehicle standards need to find a balance between protecting those on board and protecting other road users in the event of a collision. It is also important that we educate road users about risks and appropriate behaviours to assist with safe interactions across the networks.

## Implications

Taking these opportunities to embed road safety into transport projects will greatly improve road safety outcomes across the existing and future NSW network. Safety in design also provides a cost-effective approach by avoiding the need to retrofit improvements in the future.

## References

- Transport for NSW (2012). *NSW Road Safety Strategy 2012-2021*. Publicly downloadable from: [http://roadsafety.transport.nsw.gov.au/downloads/road\\_safety\\_strategy.pdf](http://roadsafety.transport.nsw.gov.au/downloads/road_safety_strategy.pdf).
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