Safe System for Universities

Module 4 Tutorial

The project pathway

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Introduction:

Traditionally, safety has been considered late in the development stages of road projects. This is a critical issue working against the Safe System objective of harm elimination. There is generally less scope to make changes in a road project, the further it develops down the project pathway. Currently, safety is considered after funding has been secured and once the concept and basic design have been decided upon. To achieve maximum benefit, safety needs to be considered before funding has been secured, while the concept is materialising. In this tutorial, you will look at the difference that can be made by considering safety at different stages throughout the project pathway.

Instructions:

Students should review Module 4, Snippet 2, *Achieving widespread implementation* of Safe System for Universities before undertaking this activity.

Form a group of 2-4 students. As a group, review the following timeline and discuss the ability to affect safety outcomes given the following scenarios.

Project timeline

Concept development: The state government announced a push for the upgrade of a major urban intersection to alleviate congestion (see Figure 1). In response, the road authority engaged a team to develop a concept. It was decided that the intersection be grade separated, with an underpass carrying one road under the other. Two conventional signalised intersections are used to convey traffic between the two roads.

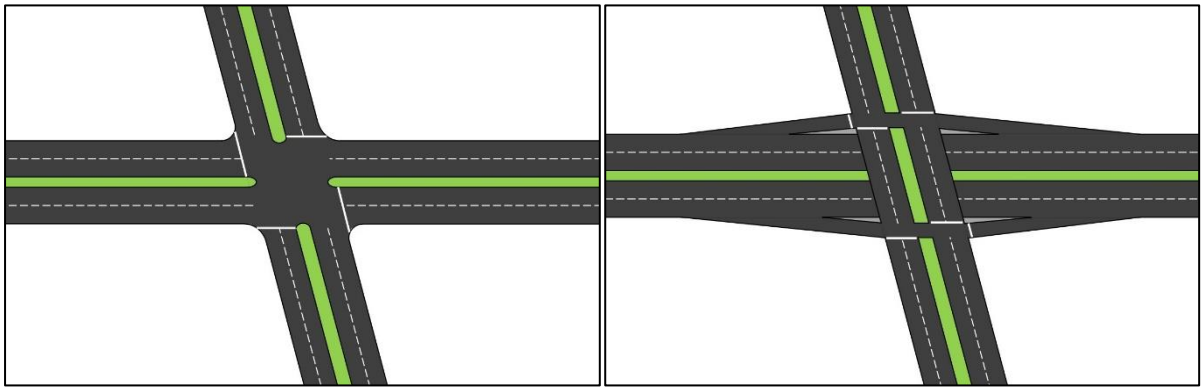

Figure 1: Current intersection (left) and upgraded grade separated intersection (right)

Funding: Based on the proposed concept, funding was secured for the grade separation project as it had been conceptualised and presented. This funding included covering the cost of acquiring specific roadside properties that would be required for expanding the footprint of the intersection.

Design: Detailed design was undertaken for the project. A Safe System Assessment was undertaken and highlighted several issues, including the potential for high severity crashes at the two signalised intersections. Roundabout control was raised as an alternative to signalisation but was rejected as the redesign had a substantially altered footprint, which would require the acquisition of different properties as to those budgeted for in the funding agreement. As an alternative, full control of right turn movements at the intersections was proposed to mitigate some risk to road users.

Build: A road safety audit was undertaken before the upgraded intersection was opened to the public. Minor safety issues were identified. One issue was the potential for drivers to confuse signals at the two intersections, leading them to potentially drive through the first intersection while the signal is red. To rectify this issue, signal phasing was altered, and additional signage was installed.

Operate: In the first five years of operation, congestion reduced by 20% and severe injury crashes reduced by 50%. In this first five years of operation, seven crashes occurred at the grade separated intersection: four minor crashes and three severe injury crashes. Of the three severe injury crashes, one occurred when a pedestrian was struck by a left turning vehicle while crossing the road, and two occurred when vehicles ran red lights and collided with other vehicles.

Questions

1. Did the intersection upgrade improve safety for road users? How did the intersection upgrade achieve this?
2. Did the upgrade make this intersection *safer* for road users, or *safe* for road users? Explain your answer in the context of the Safe System.
3. If the intersection upgrade did not make the intersection safe, what opportunities were missed in the project timeline and what could have been done differently to achieve a safe outcome?
4. A Safe System Assessment was undertaken for the intersection upgrade and although safety concerns were raised as a result of this assessment, the suggested amendments to the design were not enacted in full. What could have been done differently to ensure that the safety concerns raised in the Safe System Assessment were able to be remedied in full?