

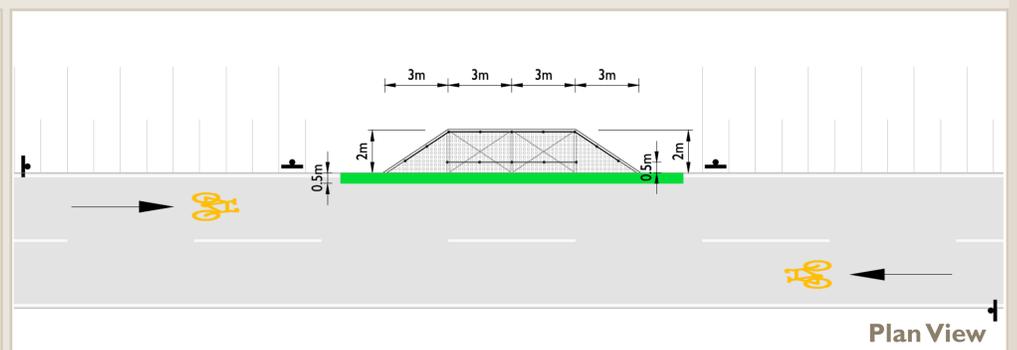
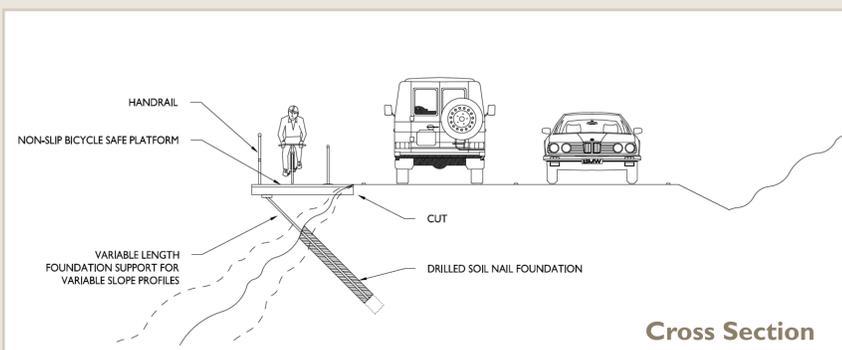
BICYCLE REST STOPS

Concept for Mountainous Terrain



To improve safety for on-road cyclists in mountainous terrain, a concept for a bicycle rest stop has been developed. The intent of the rest stop would to provide a safe space for cyclists to temporarily stop (to conduct repairs or rest) on roads where the left side of the road has numerous steep drop-offs, narrow lane widths and no shoulder. The stop would also provide a place for cyclists to move off the carriageway to allow vehicles to pass safely, rather than vehicles attempting to overtake cyclists in areas with limited forward visibility.

This concept was developed following a road safety audit undertaken on a winding mountainous road in the Gold Coast hinterland, popular with cyclists. In this location it was identified that the steep grade, narrow lanes, no shoulders and frequent unprotected drop-offs posed a risk to slow-moving cyclists and for drivers wanting to pass cyclists (as they must allow 1.0 - 1.5m clearance in Queensland). If cyclists needed to stop there was limited safe space to do as the left lane was adjacent to numerous steep drop-offs. Providing this assists with supporting cycling while providing a method to share the road space more effectively.



Features

- Frangible hold rail and hand rails
- Safe zone for allowing passing / resting / waiting
- Space to undertake repairs
- Modular and scalable if required
- Relocatable (only footings are site specific)
- Low cost, particularly following pilot program
- Low maintenance through careful selection of materials and detailed design, including permeable platform
- Signage and linemarking to support area, to be confirmed during detailed design

Opportunities

- External parties could provide partnership support
- Repair stations could be included at the sites to allow bicyclist to undertake minor repairs
- Rest stops offer a good location to undertake cycling surveys or to observe cyclist behaviours

Constructability

- Constructability is challenging due to the nature of the road types
- Risk and inconvenience during installation and maintenance
- Rest stop would be prefabricated to allow installation within a short timeframe with limited requirements for traffic management
- Footings would have to be site-specific designs given that each site would have different geometry and varying sub-soil conditions
- Ease of maintenance has been considered to limit the road safety risk of working roadside

Costs and Next Steps

- Pilot Project: \$260,000, including:
 - Design and certification of \$38,000
 - Construction of a two bay 12m unit would be approximately \$176,000. This includes procurement, traffic management and installation
 - Benefit realisation study of the pilot project is estimated at \$46,000
- Design, procurement and evaluation costs are dramatically lower on the second installation

Locations

Areas to consider installation:

- no road shoulder and narrow lanes
- unprotected steep drop-offs
- high cycling demand
- high speed differentials between cyclists and vehicles with limited overtaking opportunities
- slope is suitable for anchoring

Avoid locations where:

- there is a view where vehicles may want to stop
- rest stop will introduce additional hazards into the road space

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