



Road Safety - Constraint & Collision Barriers

Geoff Bouilly - Australia



AUSTRALIAN BRIDGES

Road Safety – Bridge Barriers

Bridge Barriers and Bridge Approach Barriers

- Risk assessment
 - Accident statistics
 - Barrier performance levels
 - Identified risks
 - Costs

Barrier Systems

- Tested systems
- In-service performance
- Multiple functions – safely contain and redirect light and heavy vehicles
- Computer simulation
- Cost of full scale testing
- Rigid, semi-rigid and flexible systems
- Multi-level systems

BRIDGE APPROACH BARRIERS & ACCIDENTS



MEDIUM PERFORMANCE LEVEL BRIDGE APPROACH BARRIER



AUSTRALIAN BRIDGES

Road Safety – Bridge Protection

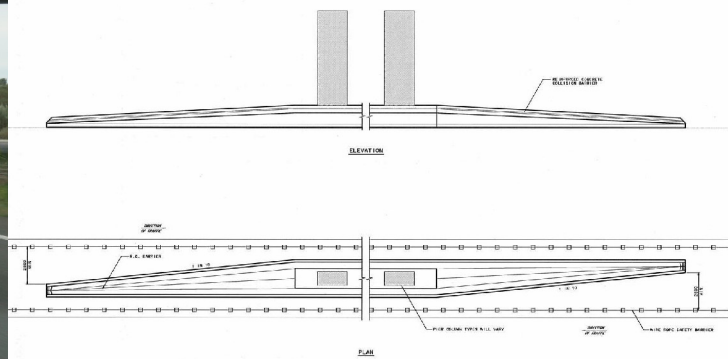
Protection of Bridge Piers and other Structures

- Road vehicles
- Rail vehicles

Protection from Over-height Vehicles

- Robust bridges
- Secondary protection systems
- Advance over-height vehicle detection systems
 - Warning to road authority bridge engineers
 - VMS warning to drivers
 - Links to intelligent vehicle systems

PIER PROTECTION – ROAD & RAIL TRAFFIC



AUSTRALIAN BRIDGES

Impacts by Heavy Vehicles



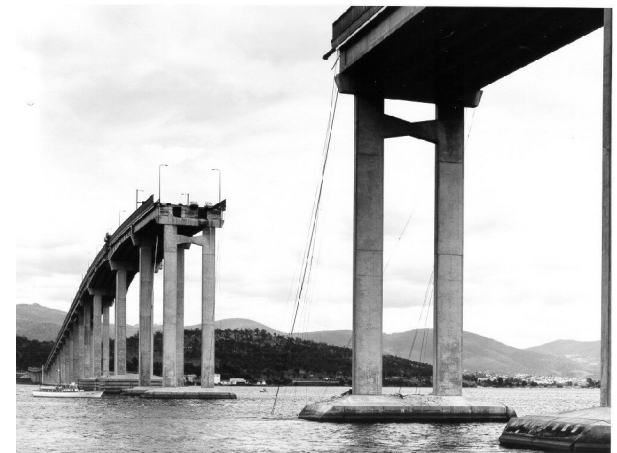
Impact and Explosion



Direct Impact



Overheight vehicles



Ship Impact