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OFFICE OF TRANSPORT SAFETY INVESTIGATIONS

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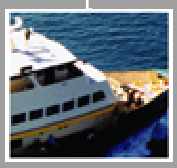

BUS SAFETY INVESTIGATION REPORT

SYSTEMIC INVESTIGATION INTO AN ALLEGED 'BLIND SPOT' ON MARK II AND MARK III MERCEDES-BADGED BUSES OPERATED BY THE STATE TRANSIT AUTHORITY.

OTSI File Ref: 03004

BUS SAFETY INVESTIGATION REPORT

ALLEGED 'BLIND SPOT' ON MARK II AND MARK III MERECEDES BUSES OPERATED BY THE STATE TRANSIT AUTHORITY

OTSI File Ref: 03004 **27 September 2005**	**Office of Transport Safety Investigations** **Level 21, 201 Elizabeth Street** **Sydney NSW 2000**

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Established on 1 January 2004 by the *Transport Administration Act 1988*, the Office is responsible for determining the causes and contributing factors of accidents and to make recommendations for the implementation of remedial safety action to prevent recurrence.

OTSI investigations are conducted under powers conferred by the *Rail Safety Act 2002* and the *Passenger Transport Act 1990*. OTSI investigators normally seek to obtain information cooperatively when conducting an accident investigation. However, where it is necessary to do so, OTSI investigators may exercise statutory powers to interview persons, enter premises and to obtain, examine and retain physical and documentary evidence. Where OTSI investigators exercise their powers of compulsion, information so obtained cannot be used against those persons providing information in criminal or civil proceedings.

OTSI investigation reports are submitted to the Minister for Transport for tabling in both Houses of Parliament. Following tabling, OTSI reports are published on its website www.otsi.nsw.gov.au

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The Office of Transport Safety Investigations also provides a Confidential Safety Information Reporting facility for rail, bus and ferry industry employees. The CSIRS reporting telephone number is 1800 180 828

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PART 1 EXECUTIVE SUMMARY

1.1 In October 2004, the NSW Senior Deputy Coroner approached OTSI seeking assistance to investigate an alleged blind spot on the Mark (Mk) II Mercedes buses operated by the State Transit Authority (STA). The Deputy Coroner's request was made in the context of a coronial inquiry into a series of fatal accidents, occurring between 1994-2002, where pedestrians were fatally injured after having been struck by a Mk II Mercedes bus operated by STA. OTSI accepted the Senior Deputy Coroner's brief in February 2005 and commenced a systemic investigation.

1.2 The existence of a blind spot on Mk II Mercedes buses operated by STA was first posited by a consultant traffic engineer in 1998. The same engineer, acting on behalf of a bus driver involved in one the accidents under review, subsequently testified to the existence of such blind spots. The brief of evidence, which included the engineer's report, was reviewed within the NSW Police's Traffic Services Branch in late 2003. The reviewing officer found the existence of a blind spot on the Mk II bus as being "plausible".

1.3 Whilst OTSI was asked to investigate an alleged blind spot in the Mk II Mercedes Bus, it is important to note that many buses are 'hybrids' with one manufacturer supplying the chassis, engine, transmission and other mechanical components, whilst another manufacturer provides the coachwork. The Mk II Mercedes bus operated by STA is in fact a Mercedes chassis fitted with coachwork supplied by the Pressed Metal Corporation. In the course of OTSI's investigation, it also became apparent that in respect of those matters that might affect visibility, the coachwork on STA's Mk II and Mk III Mercedes buses is identical. **Accordingly, OTSI's investigation focused more properly on establishing the presence, or otherwise, of a blind spot on Mk II and Mk III 'Mercedes-badged' buses operated by STA.** This is an important distinction because, whilst the buses in question are commonly referred to as the Mercedes Mk II and Mk III, Mercedes' design is not at issue in this instance.

1.4 After having reviewed evidentiary material provided by the Coroner's office and visiting the incident sites, OTSI found that the circumstances surrounding each incident possessed distinctively similar characteristics. OTSI then utilised measurements taken from within a Mk II Mercedes-badged bus, together with computer-aided design software, to confirm that the 'A' pillar on the Mk II and Mk III Mercedes-badged buses operated by STA, obstructs the vision of a driver seated in the normal driving position. Significantly, the accidents under review occurred after more recently designed buses, affording the driver an improved field of visibility, had been introduced into service. Although it could not be established conclusively, OTSI has assessed that as drivers became accustomed to the improved visibility of more modern buses, they may have overlooked, or become less inclined to either remember or observe the requirement to adjust their driving position to overcome the limitations of visibility on the Mk II and Mk III Mercedes-badged buses.

1.5 OTSI also found that, while STA did not appreciate the limitations imposed by the 'A' pillar design at the time it introduced the Mk II and Mk III Mercedes -badged buses into service, it acted well before the period in which the fatalities occurred, and continues to act, on a variety of fronts, to reduce known risks.

1.6 OTSI recommends that:

a. The NSW Coroner note OTSI's findings.
b. STA include specific references and requirements in relation to blind spots, by vehicle type, in their driver education and assessment program.
c. STA examine alternatives in relation to the placement and type of side mirrors on their Mk II and Mk III Mercedes-badged buses.
d. STA examine the feasibility of accelerating the planned replacement of its Mk II and Mk III Mercedes-badged buses.
e. The Ministry of Transport (MoT) make other operators aware of the specific risks posed by the blind spot on the Mk II and Mk III Mercedes-badged buses operated, or previously owned, by STA.

PART 2 FACTUAL INFORMATION

Background

2.1 In October 2004, the NSW Senior Deputy Coroner approached OTSI seeking assistance to investigate an alleged blind spot on Mk II Mercedes buses operated by the State Transit Authority (STA). The Coroner's request was made in the context of a coronial inquiry into a series of fatal accidents, occurring between 1994 - 2002, where pedestrians were fatally injured after having been struck by a Mk II Mercedes bus operated by STA.

PART 3 TERMS OF REFERENCE

3.1 In February 2005, OTSI accepted the brief from NSW Senior Deputy Coroner and the Chief Investigator OTSI directed an investigation under Section 46B of the *Passenger Transport Act 1990*, requiring the investigating officer to;

a. identify the systemic factors that constituted the common causal links between each of the fatal incidents;

b. identify whether the systemic factors might have been anticipated and assess the effectiveness of the State Transit Authority's risk management strategies since the incidents, and

c. advise on any matters arising from the investigation that would enhance the safety of bus operations.

PART 4 ANALYSIS

Common Causal Links

4.1 **Review of Evidentiary Material.** OTSI reviewed a body of evidentiary material provided to it by the office of the Senior Deputy Coroner. It noted that in each of the four accidents bought to its attention, impairment, fatigue or mechanical failure were not considered to have been either causal or contributory factors. Of particular significance was that in each instance, the pedestrian had proceeded onto a controlled pedestrian crossing, with the green walk signal in their favour, and was struck by a Mk II bus, operated by STA, entering the crossing zone from the pedestrian's right, i.e., by a bus proceeding through a green light and making a left turn.

4.2 OTSI's review also noted related testimony by a consultant transport engineer[1]. The engineer testified that the original positioning of the nearside (left-hand side) mirror prevented a bus driver from observing a pedestrian walking or standing next to the nearside of the bus. He further testified to the existence of, under certain conditions, "a moving blind spot"[2]. The engineer identified those conditions as being:

a. a Mk II bus is stationary at an intersection with the intention of making a left turn;

b. a pedestrian is standing on the foot path, to the left, and slightly in front, of the bus, or the bus driver's line of vision is obstructed by a power pole or something similar;

c. the pedestrian, begins to cross the intersection at the same relative speed as a bus entering the intersection from his/her left, and

[1] The consultant holds a Masters degree in Engineering Science (Transport Engineering)
[2] Evidence provided in the matter of the Crown v. Fehlberg at Malabar on 20 September 2003.

d. whilst preparing to turn, the bus driver relies solely on the bus mirrors and windows and does not lean forward or back to check around the visual obstruction presented by the 'A' pillar.[3]

4.3 **Design**. STA introduced the Mk II Mercedes bus into service between 1978 and 1980 to satisfy an increasing demand for public transport at the time and to replace its aging fleet of Leyland Leopard buses. A Mk III was subsequently commissioned into service in the period 1981-1983. With the exception of subtle changes in step and ceiling heights, the two bus types are very similar in appearance. In respect of those matters that might affect the driver's visibility, STA's Mk II and Mk III Mercedes buses are, as can be seen in Photographs 1 and 2 below, almost identical. It is important to note that many buses are 'hybrids', with one manufacturer supplying the chassis, engine, transmission and other mechanical components, whilst another provides the coachwork. The Mk II Mercedes bus operated by STA is in fact a Mercedes chassis fitted with coachwork supplied by the Pressed Metal Corporation[4]. **Accordingly, OTSI's investigation has more properly focused on establishing the presence, or otherwise, of a blind spot on Mk II and Mk III 'Mercedes-badged' buses operated by STA.**

'A' Pillar

Photograph 1 - Mk II "Mercedes"

[3] This evidence was reviewed within the NSW Police Traffic Services Branch and found to be "plausible" (Report dated 24 November 2003).
[4] PMC was taken over by Ansair in the early 1990s and Ansair has also since ceased to trade.

Photograph 2 - Mk III "Mercedes"

4.4 More contemporary bus designs have narrower 'A' pillars, or an 'A' pillar incorporated into a triangular peep-window, thereby providing bus drivers with an improved field of vision. These design features are apparent in Photographs 3 and 4 of STA's Mercedes Mk IV and Scania variants below.

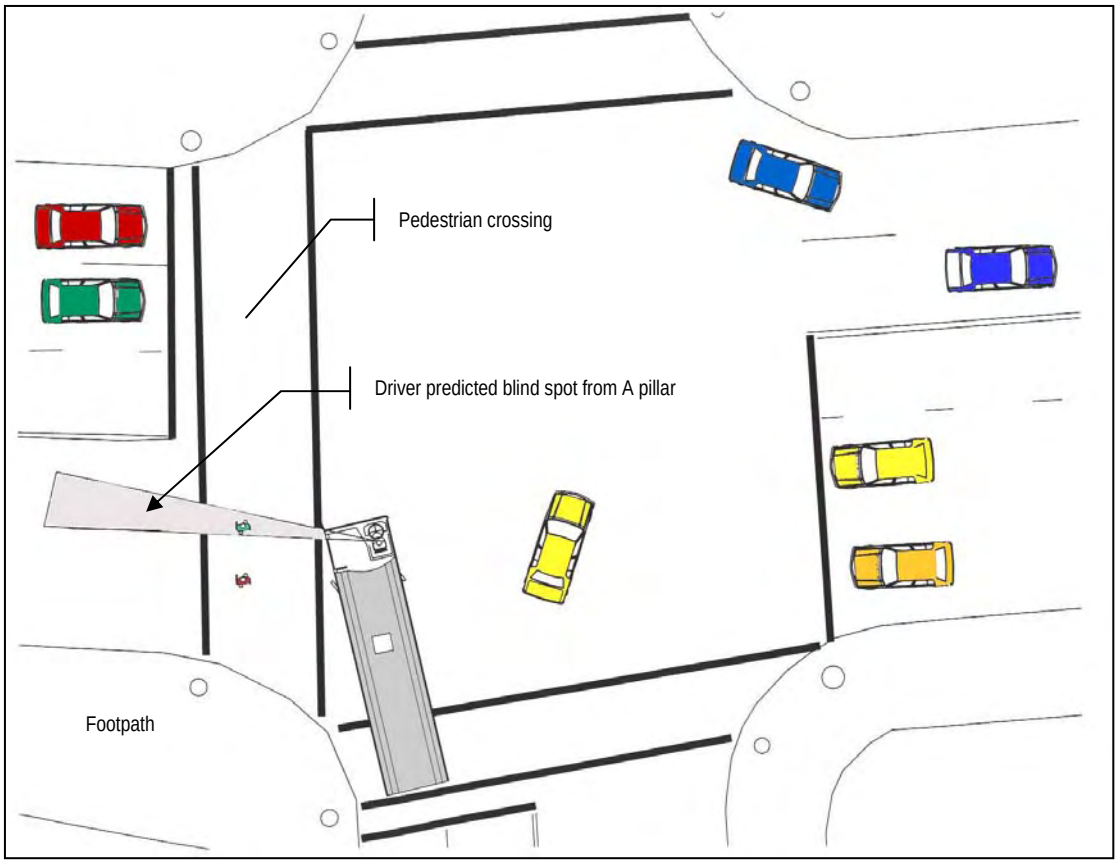
Photograph 3 - Mk IV "Mercedes"

Photograph 4 - Scania

4.5 Notwithstanding improvements in design, all vehicles have, under certain circumstances, a 'blind spot'. The 'A' pillar on a truck or bus is vertically positioned to provide additional structural integrity. The pillar on buses typically also provides part of the housing for the front door frame. In contrast, the 'A' pillar on a standard family vehicle is oriented at approximately 45 degrees and is therefore less likely to obstruct a driver's view of a standing pedestrian in close proximity. OTSI noted that whilst the integrity of the 'A' pillar on the Mk II and Mk III Mercedes-badged buses operated by STA is not in question, 50% of the pillar is comprised of moulded fibreglass and contributes to design aesthetics, rather than structural integrity, i.e., the 'A' pillar on these models is 50% wider than need be. Indeed, much of this fibreglass was removed and replaced with glass in the Mk IV.

The difference in 'A' pillar width between STA's Mk IV and Mk II Mercedes-badged buses.

4.6 To define the magnitude of the blind spot effect, OTSI utilised a commercially available computer-aided design program and measurements taken from the driver's seat in a Mk II Mercedes-badged bus to produce the representative diagram below. OTSI calculated that the width of the 'A' pillar on STA's Mk II and Mk III Mercedes-badged buses produces a blind spot which, if the driver remains in his/her normal driving position, increases in width by approximately one metre in every four metres from the left hand front corner of the bus.



Driver's predicted blind spot for a Mercedes Mark II & III bus when turning left at an intersection

4.7 To overcome the blind spot on STA's Mk II and Mk III Mercedes-badged buses, a driver must either lean forward or backwards to see around the 'A' pillar.

4.8 **Intersection and Signalling Conditions.** In each of the four instances under consideration, there were distinct similarities in the layout of each intersection, including the type of traffic signals used. The accident locations involved the intersection of two thoroughfares with marked and lights controlled pedestrian crossings across each of the four intersecting streets. On each occasion, vehicles turning left, right, or travelling through the intersection, were regulated by circular traffic lamps only, i.e., arrow lamps were not provided for turning movements. At each intersection, vehicles wishing to make a left turn were required to first wait for a green light, i.e., there was no provision for vehicles to turn on a red signal after stopping. In

each instance, the synchronisation of lights at the time of the accidents was such that the buses were proceeding through a green circle light to make a left turn, whilst pedestrians to the bus driver's left were, with the benefit of a different green "walk" light, simultaneously moving across the road the bus was entering. This is not an uncommon situation in Sydney. In such situations, the obligation rests with the driver to give way to pedestrians within the confines of the crossing. This requires drivers to be attentive and necessitates visibility of those pedestrians who might be in their path.

Anticipation and Management of Risk

4.9 OTSI reviewed relevant organisational arrangements within STA which established that the company has, over time, introduced a range of measures to mitigate the potential for their drivers being involved in collisions. These measures have included:

a. the introduction of a formally constituted driver training and development program in the early 1970s;[5]

b. the introduction of a nationally recognised driver development program at Certificate III level in 1999;

c. the acquisition of new buses providing improved visibility for drivers;

d. identification of a restricted standing area forward of the driver's compartment, defined by coloured floor markings, to improve passenger safety and driver visibility;

e. provision of warning signs to alert passengers not to talk to a driver whilst a bus is in motion;

f. the introduction of policy which makes it an offence for bus drivers to use the two-way radio or a mobile phone whilst a bus is in motion;

g. the issuance of Safety Alert notices, similar to the example at Attachment 1, to all employees, and

[5] This program was aligned to the RTA's Heavy Vehicle Competency Based Assessment Scheme in 1995.

h. most recently, the phased implementation of a Bus Operators' Code for Safe Driving, shown at Attachment 2.

4.10 Significantly, STA relocated the left-side mirrors on its Mk II Mercedes-badged buses in 1998, but in the opinion of the traffic engineer this "did not substantially improve the driver's view with regard to blind spots" and that the relocation "more than likely contributed to the driver's loss of vision of the pedestrian on June 20, 2002".[6]

4.11 Notwithstanding that fatigue was eliminated as a contributory factor in each of the incidents reviewed, OTSI examined STA's fatigue management arrangements. OTSI noted that STA's fatigue policies comply with the requirements of the Road Transport (Driver Fatigue) Regulation of 1999 and that the award agreement covering STA's drivers also makes specific provisions in relation to the management of fatigue. STA also requires its employees to declare any secondary employment.

4.12 OTSI regarded it as significant that the four accidents occurred during a period in which STA introduced new bus types with improved 'A' pillar designs. OTSI considered the possibility that drivers, accustomed to improved visibility, might have become less active in looking around the 'A' pillar when placed back into either a Mk II or Mk III Mercedes-badged bus. STA did not have the type of records dating back to this period which might have allowed this consideration to have been further tested. OTSI did note, however, that while STA provides training to their drivers on specific bus models, this does not extend to identifying the visual limitations from within varying bus types, and in particular, those which exist from within its Mk II and Mk III Mercedes-badged buses when engaging in left turns at intersections.

[6] Evidence provided in the matter of the Crown v. Fehlberg at Malabar on 20 September 2003.

4.13 OTSI noted that the intersection of Anzac Parade and Meeks Street, Randwick, where two of the accidents under review occurred, was upgraded within weeks of the second fatality. One of the results of the upgrade is that this intersection is now protected by coordinated pedestrian crossing lights and turning arrows for vehicular traffic.

PART 5 FINDINGS

5.1 As a result of its inquiries, OTSI finds that:

a. In the four instances of pedestrian fatality OTSI was asked to review, there were common features at the accident scene relating to the type of intersection, type of traffic lights and type of vehicles.

b. The Mk II and Mk III Mercedes-badged buses operated by STA, whilst incorporating subtle differences in floor and ceiling height, offer the driver an identical field of vision.

c. The vision of a driver seated in a normal driving position in STA Mk II or Mk III Mercedes-badged buses is obstructed by the 'A' pillar and the degree of obstruction is greater than that in later model buses operated by STA.

d. The limitations of the 'A' pillar design on STA's Mk II and Mk III Mercedes-badged buses are such that a driver making a left turn might not see a pedestrian on their immediate left if the driver remains in the normal driving position and does not move to look around the 'A' pillar.

e. To overcome the obstruction or 'blind spot' posed by the 'A' pillar on a Mk II or Mk III Mercedes-badged bus while turning left, drivers must lean forward or backwards in their seat. This is not able to be done readily when negotiating a turn.

f. Drivers who have not operated STA's Mk II or Mk III Mercedes-badged buses for some time may be less likely to remember, or observe, the requirement to adjust their position in the seat in order to see around the 'A' pillar.

g. The limitations imposed by the 'A' pillar design were not apparent to STA at the time it introduced the Mk II and Mk III Mercedes-badged buses into service, but it had acted well before the period of these fatalities, and continues to act, on a variety of fronts to reduce known risks.

PART 6 MATTERS THAT MIGHT ENHANCE THE SAFETY OF BUS OPERATIONS

4.14 **Removal from Service or Modification of Mk II and Mk III Mercedes Buses.** The most obvious solution to eliminating the particular risks associated with the 'A' pillar design of STA Mk II and Mk III Mercedes-badged buses would be to either remove these bus types from service, or to modify their 'A' pillars.

4.15 STA is currently operating 116 Mk II and 207 Mk III (30 of which are articulated) Mercedes-badged buses. OTSI has reservations about the feasibility of retrofitting a more contemporary 'A' pillar to the Mk II and Mk III buses.[7] STA advises that it intends to retire its Mk II fleet by 30 June 2006 and the Mk III fleet by late 2008. [8] STA should examine the feasibility of bringing its disposal program forward. That said, OTSI acknowledges that it is not feasible to simply withdraw these variants from service at this time, given the level of demand STA is presently required to service.

4.16 OTSI considers that there may be further scope to improve visibility, by a combination of mirror positioning and mirror type, on STA's Mk II and Mk III Mercedes-badged buses. STA has advised OTSI that it will be engaging a consultant to complete a comparative study on the physical blind spots that exist on all of its bus types and that the results will be used to develop appropriate strategies to manage the risks associated with any identified blind spots[9]. This provides STA with an opportunity to examine the positioning and type of mirrors fitted to its Mk II and Mk III Mercedes-badged buses.

4.17 **Modification of Traffic Lights.** Had the flow of traffic at the crossings under review been regulated by arrow lights, as indicated below, vehicles

[7] OTSI's reservations are based on the extent of work that would be entailed; the impact on services when vehicles were withdrawn for modification, and the costs given that the vehicles are approaching their end of life.
[8] Advice provided by GM Safety and Standards, STA on 28 May 2005.
[9] Advice provided by GM Safety and Standards, STA on 28 May 2005.

would have been prohibiting from entering the area where the pedestrians, with the benefit of a walk signal, were crossing.

4.18 The RTA has advised that the cost of replacing circle lights with lights also incorporating arrows and 'walk' illumination ranges between $20,000 and $120,000 per location, depending largely on the extent of re-cabling required.[10] Quite apart from the costs, the benefits of any program to upgrade a significant number of lights would also have to take into account the impact of reduced vehicular traffic flow. The limitations of this option should be readily apparent.

[10] Advice provided by RTA's Manager, Sydney Coordinated Adaptive Management System (SCATS)

PART 7 RECOMMENDATIONS

6.1 OTSI recommends that:

a. The NSW Senior Deputy Coroner note OTSI's findings.

b. STA includes specific references and requirements in relation to blind spots, by vehicle type, in their driver education and assessment program.

c. STA examines the fitting and placement of alternative side mirror types to its Mk II and Mk III Mercedes-badged buses.

d. STA examines the feasibility of bringing forward the planned replacement of its Mk II and Mk III Mercedes-badged buses.

e. The Ministry of Transport makes other operators aware of the specific risks posed by the blind spot on STA's Mk II and Mk III Mercedes-badged buses.

ATTACHMENTS

Attachment 1 Typical Safety Alert

Attachment 2 Bus Operators Code for Safe Driving.

Attachment 1- Typical Safety Alert

SAFETY ALERT

Title:	***" Pedestrian Safety "***
Attention of:	**Bus Operators, CSC's, Depot, Operations and General Managers, Radio Room.**
Date Issued: 20 June 2002	**Safety Alert No: SA 2002/99**

ISSUE

With the onset of reduced light during winter and during periods of poor visibility, Bus Operators are advised to be aware of the increased risk of injury to pedestrians who are unused to the changed conditions.

In State Transit:

- There are approximately 50 pedestrian incidents annually.

In New South Wales:

- There are approximately 100 pedestrian fatalities and nearly 3000 injuries annually; and
- The majority of pedestrians are hit on roads zoned 60 km/h or less in urban areas.

State Transit is reviewing pedestrian injury "hot spots" and requests that all Bus Operators exercise caution when operating in the vicinity of pedestrians.

INSTRUCTION

✓ **Adopt** a defensive driving attitude, particularly near pedestrians;

✓ **Allow** for greater safety margins;

✓ **Do not** assume that a pedestrian has seen you.

We have a duty of care to provide injury free services

State Transit and its employees have a mutual responsibility to ensure that we provide a safe service. Safe means no injuries to passengers, staff, pedestrians and other road users. It also means minimising near misses such as the need for heavy braking, passengers falling and vehicle collisions.

This requirement is not optional - by law, we have a duty of care to our passengers to ensure that they are carried safely. When a passenger is injured on our service, it is distressing and often we have to pay costly compensation to passengers for the pain and suffering incurred. We have a responsibility for: -

- ✓ **Ourselves**
  To ensure personal safety and your health and that we remain free from the stress and anxiety that accidents may cause.
- ✓ **Our Passengers**
  so they can travel safely without risk of slips, trips or falls resulting in injury;
- ✓ **Other Road Users**
  To minimise the risk of collisions;
- ✓ **The Community**
  To provide a safe service for the benefit of everyone.

This Safe Driving Code has been developed to focus all our efforts to ensure that State Transit will Provide:

- ✓ Driver training to ensure that we have the professional and technical skills to drive in a safe manner;
- ✓ Rosters, schedules and timetables to ensure we work in a safe working environment;
- ✓ Occupational Health and Safety systems and Employee Assistance Programs to provide advice and support for safety and personal issues;
- ✓ Regular risk assessments of our operations to look out for potential risks and minimise them by eliminating those risky operations, modifying the operations to reduce risk or providing additional protection in the form of signs or safety equipment;
- ✓ Management support in any issues that affects drivers' ability to do their jobs.

Bus Operators' professional approach and skills will minimise the likelihood of:

- ✓ Passengers being be thrown from their seats or falling when seated or standing;
- ✓ Passengers being caught in doors;
- ✓ Pedestrians being at risk around the bus;
- ✓ Other vehicles and property being damaged in incidents involving our buses.

Sydney Buses

Bus Operators' Code for Safe Driving

take control of safety

- ✓ No Incidents
- ✓ No Injuries
- ✓ No Collisions

Issued September 2004

Safety

Driving safely is about managing:

1. Attitude
2. Awareness
3. Observations
4. Speed
5. Position
6. Reporting

1. Attitude

We must:

- ✓ Have the right attitude to provide safe services to our passengers.
- ✓ Have the right attitude to believe that we have the ability to provide an incident free service and that we have control over safety.
- ✓ Be physical and mentally fit to drive safely. This means not driving if fatigued or affected by drugs or alcohol.
- ✓ Always drive defensively and avoid aggressive drivers.
- ✓ Be respectful of other motorists, do not contest the right of way.

2. Awareness

We must:

- ✓ Eliminate distractions while driving such as mobile phone use, smoking and reading newspapers. These distractions have the potential to kill.
- ✓ Consider the traffic, road and weather conditions that will affect safety and plan ahead to anticipate poor driving of other road users.
- ✓ Pay particular attention to the special environments in which we work, such as depots, public streets, dedicated bus lanes and interchanges as these bring different risks.
- ✓ Manage the risks associated with the needs of special passengers. Elderly passengers, disabled persons and children need extra time to become secure in the bus.
- ✓ Not move the bus until passengers are seated or have made themselves secure by holding on to grab rails. Ensure that they are given time to do so.

3. Observation

We must:

- ✓ Set mirrors correctly and use them constantly
- ✓ Scan the road so we are constantly aware of surrounding traffic.
- ✓ Anticipate other road users.
- ✓ Ensure doors are clear before we operate them.
- ✓ Report all unsafe acts or occurrences.

4. Speed

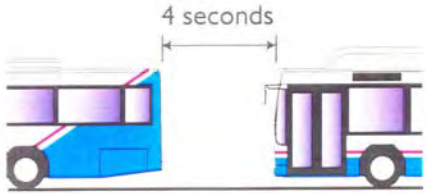
We must:

- ✓ Drive to a speed appropriate to the conditions in order to enable us to observe and interpret the driving environment.
- ✓ Accelerate, drive and brake smoothly to maintain precise control over the bus, eliminating passenger injuries.
- ✓ Apply brake pressure steadily at the beginning of a stop and ease off as the bus slows down. Just before the vehicle comes to a complete stop ease the brake slightly to prevent the bus from jerking.
- ✓ Be sure to slow down when making turns as older people and children could fall and injure themselves.
- ✓ When moving off avoid sharp acceleration as passengers can be injured and the vehicle can be damaged.
- ✓ 50 The default speed limit on most streets is now 50km/h. Speeding is illegal.

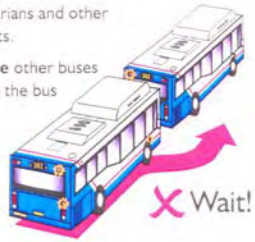
5. Position

We must exhibit professional judgment to manage the bus on the road in order to avoid incidents. We must:

- ✓ Adjust our speed to maintain at least a 4 second gap from the vehicle in front.



- ✓ Make allowances for traffic conditions to avoid the need to brake heavily.
- ✓ Accelerate and brake as smoothly as possible to avoid passenger injuries.
- ✓ Use the brake retarders to brake smoothly - **don't pump the brakes** - it is uncomfortable and can cause falls.
- ✓ Be aware of pedestrians and other drivers in blind spots.
- ✓ **must not overtake** other buses in bus zones where the bus is obliged to stop.
- ✓ must move to the head of the stop before leaving a bus zone.



6. Reporting

If you know of unsafe situations, tell us about it by writing a General Report and submitting it to your Operations Manager. This will help make the roads safer and your job easier.