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INTRODUCTION

This annual report provides statistics on all reported road traffic and Metrorail passenger train accidents which occurred within the City of Cape Town during the year 2000. This is the fourth annual report published by the Metropolitan Traffic Safety Bureau (MTSB) of the Transportation and Traffic Directorate, Cape Metropolitan Council (CMC) Administration. The statistics assist in policy formulation for road safety, traffic and transport planning studies, the production of road safety plans and in the planning of traffic law enforcement.

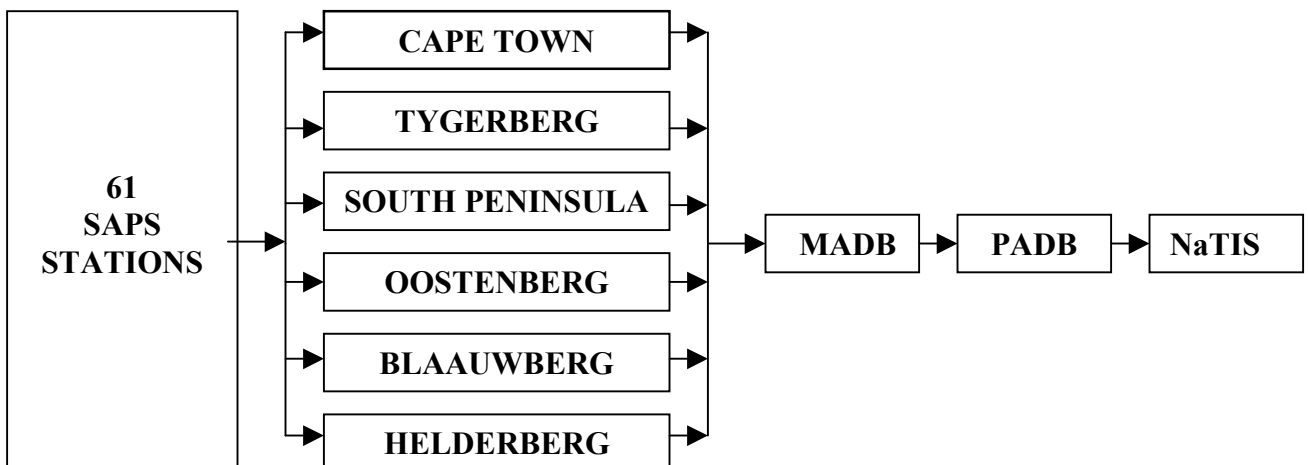
Road accident data has been extracted from copies of the Officers Accident Report (OAR) forms which were forwarded from the 61 South African Police Services (SAPS) stations within the City of Cape Town and entered onto the accident databases situated at the following traffic departments in the City:

Cape Town Administration
Tygerberg Administration
South Peninsula Administration
Oostenberg Administration
Blaauwberg Administration
Helderberg Administration

Five of the six administrations currently capture road accident data on the TRAFMAN system – the Cape Town Administration uses the CIVITAS system.

The accident data from the capturing authorities has been loaded onto the Metropolitan Accident Database (MADB) of the Metropolitan Traffic Safety Bureau established by the Transportation and Traffic Directorate of the CMC Administration to monitor Citywide accident trends. The MADB has a built-in duplication elimination program to eliminate any duplicate accident reports. Data from the MADB is transferred to the Provincial Accident Data Base (PADB) in TRAFMAN format for onward transmission to National Traffic Information System (NaTIS). (see Diagram 1)

DIAGRAM 1:



The quality of road accident data contained in the MADB, which was established in 1997, is slowly improving with time. The introduction of the more comprehensive Officer's Accident Report form, the OAR, in October 1999 has improved the quality of accident data somewhat; however poor completion of OAR forms (legibility, accident location, etc.) by some reporting authorities (SAPS, Traffic Departments) continues to be cause for concern.

Specific reports such as those contained within this document can be used to further investigations relating to road accidents, namely:

Accidents by month, time of day
Accident type and casualty classification
Pedestrian Involvement – Age distribution
Worst Accident Locations
Worst Pedestrian Accident Locations

The assistance received from the SAPS, the Administrations and Metrorail is gratefully acknowledged. Whilst every effort has been made to ensure the accuracy of the information contained in this report, inaccuracies can and do occur as a result of the very nature of the information used.

Additional information may be made available on request from:

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Transportation and Traffic Directorate
Cape Metropolitan Administration
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DEFINITIONS

Classification and definitions of the severity of injuries sustained in road accidents

Fatal Injury

Injury which causes death, either immediately or subsequently, but not later than six days after the accident.

Serious Injury

Fractures, crushings, concussion, internal injuries, severe cuts and lacerations, severe shock requiring medical treatment and any other injuries which necessitate hospitalisation or confinement to bed.

Slight Injury

Cuts and bruises, sprains and light shock not requiring hospitalisation.

Classification and definitions of the severity of a road accident

Fatal Accident

Accidents involving the death of persons; either immediately or subsequently as a direct result of the accident. Deaths up to six days after the date of accident are included.

Serious Accident

Accidents involving serious injuries to persons.

Slight Accident

Accidents involving slight injuries to persons.

Casualty Accident

Accidents involving a fatal, serious or slight injury.

Damage-only Accident

Vehicle or property damage, but no injury of any kind to persons.

E.A.N. (Equivalent Accident Number)

The E.A.N. is used to compare or rate locations by applying factors to different accident types based on accident costs for all accidents. A fatal accident is multiplied by 25.2, serious injury accident by 5.8, slight injury accident by 1.5, and damage-only accident by 1 (See Page 43).

S.I. (Severity Index)

The S.I. is the average severity of accidents at a particular location (i.e. $S.I. = E.A.N./total$ number of accidents).

SUMMARY OF GENERAL TRENDS

In the year 2000, 75972 accidents which occurred in the City of Cape Town were reported to the South African Police Services or Traffic Departments. This represents an average of 208 per day and an increase of 21.0% over the 62 878 accidents recorded during 1999. These accidents resulted in 17578 casualties, 48 per day on average which represents an increase of 37.0% compared with the figure of 12865 recorded in 1999.

The substantial increases in the number of accidents and casualties in the City of Cape Town during the year 2000 follow small increases of 0.06% for accidents and an increase of 0.8% in casualties during the year 1999. The year 2000 increases should be viewed with concern given the City's target of reducing casualties by 10% per annum.

The very high number of accidents and resulting casualties continue to place a substantial burden on society in terms of social, emotional and economic costs. It is worth pointing out that the number of people killed on the roads in the City approximates to two large jet aircraft crashing each year with no survivors.

The cost of road traffic accidents in 2000 in the City of Cape Town is estimated to have been R1.9 billion. This suggests that additional resources should be invested to expand existing road safety programs. Also new initiatives need to be developed and introduced by all roleplayers in road safety in an endeavour to reduce the unacceptably high number of traffic accidents and casualties in the City of Cape Town.

Figure 1 reflects a summary of the accidents and casualties that occurred during the year 2000.

ACCIDENT TRENDS

The number of accidents in the City of Cape Town increased by 21.0% in the year 2000 following an increase of 0.6% in the year 1999. In the year 2000 there were 75972 accidents of which 0.7% were fatal, 15.5% resulted in injuries and 83.8% were damage-only. The number of fatal accidents has fluctuated over the past few years with an 18.0% decrease in the year 2000 following a 17.1% increase in the year 1999. There appears to be an under-reporting of fatal accidents in some areas of the City. Injury accidents showed a substantial increase of 35.5% following an increase of 0.7% in 1999 (**Table 1, Figure 2**).

In the year 2000, 44.0% of all recorded accidents occurred in the area of Cape Town Administration followed by the Tygerberg Administration with 25.0%. Helderberg Administration (6.0%) had the least number of accidents but experienced an increase of 26.7% over the year 1999's figures. There has been an increase of 52.4% in the number of accidents in the Tygerberg Administration and an increase of 61.8% in Helderberg Administration since 1997 (**Table 2, Figure 3**).

Accidents involving pedestrian casualties accounted for 41.9% of all casualty accidents. A higher than average number of pedestrian accidents (56.6%) occurred in Tygerberg Administration area which has 32.3% of the City's population (**Table 3, Figure 4**).

With regard to the monthly variation in accident numbers, the worst month for accidents was May when 9.2% of accidents occurred, followed by March (9.0%). The lowest number of accidents occurred in January (7.6%) (**Table 4, Figure 5**).

Figure 6 reflects the monthly distribution relating to pedestrian accidents with the worst month being July (10.2%). Considering the day of the week, the worst day was Saturday when 18.0% of all accidents occurred followed by Friday with 16.0% (**Table 5, Figure 7**).

As in previous years, the worst hour of the day was in the evening between 17:00 and 18:00 when 8.6% of all accidents occurred. There is a broad peak between 15:00 and 19:00 during which time 28.2% of accidents occurred. The morning peak two hours between 07:00 and 09:00 accounts for 12.2% of accidents (**Table 6, Figure 8**).

Figure 9 reflects the occurrence of accidents during the Easter and Christmas holiday periods. For the 12 day Easter period under review, the annual daily average number of accidents was exceeded on 5 days, with the worst day being 25 April the day after Family Day. For the 32 day Christmas period, the annual daily average number of accidents was exceeded on 19 days with the worst day of the year being Friday 15 December (construction shutdown) followed by Friday 08 December and Friday 22 December (start of long weekend).

Considering known light conditions at the time of accidents, 21.7% of all accidents occurred in dark conditions and 5.1% at dawn/dusk. Significantly 57.2% of all fatal accidents occurred during dark or dawn/dusk conditions (**Table 7**).

Regarding known road surface type, unsurprisingly 95.7% of accidents were on surfaced roads **(Table 8)**.

With regard to road surface conditions, 85,0% of accidents were on dry roads. This is a decrease of 2.9% over 1999. **(Table 9)**.

In the year 2000, 121303 registered vehicles were involved in accidents representing increases of 5.7% over the year 1999 and 11.9% over the year 1998 respectively. The combi/minibus/bus vehicle categories accounted for approximately 6.3% of all accidents although these only represent 2.1% of the registered vehicle population. This situation may well be inter alia, due to the large number of trips these types of vehicle make per day **(Table 10, Figure 10)**.

The City's accident rate per 100 000 registered vehicles is 1003, which is approximately 29% higher than the national average.

Figure 11 reflects a wide range of accident rates per 100 000 population across the City with Blaauwberg Administration, Helderberg Administration and Cape Town Administration well above the City average – an indication perhaps of the disparity in car ownership between Administrations.

The accident rates per kilometre of roadway in the City of Cape Town, reflected in **Figure 12**, mirror the accident situation in the various areas already described.

In terms of accident location it should be noted that the vast majority of accidents which occurred in the City during the year 2000 were recorded as unspecified or inadequately specified locations. A detailed or accurate analysis of accident locations, vital for the determination and prioritisation of remedial measures and law enforcement actions has therefore not been possible. An attempt has however been made to identify the sections of road and intersections with the worst accident history in each Administration from the available data **(Table 11 & Table 12)**.

CASUALTY TRENDS

During the year 2000, the 12337 casualty accidents resulted in a total of 17579 casualties. This represents a substantial increase of 36.6% compared with the year 1999. Compared with the year 1999, fatalities in the year 2000 decreased substantially by 13.6% having increased by 10% in the year 1999. Serious injuries increased by 25.2% whilst slight injuries increased by 42.1%. The City's fatality rate per 100 000 vehicles is 8.8, which is approximately 36% below the national average. There however appears to be under reporting of fatalities in some areas of the City (**Table 13, Figure 13**).

Casualties in Helderberg have increased almost threefold and have almost doubled in Tygerberg Administration since 1997(**Table 14, Figure14**).

Pedestrian casualties in the year 2000 showed a substantial 36.5% increase compared to the previous year, after a 6.5% decrease from the year 1998. The 5186 pedestrian casualties accounted for 29.4% of all casualties, similar to that of the 1999. Pedestrian fatalities decreased by 24.1% in the year 2000 having increased by 11.6% the previous year. Serious injuries increased by 38.1% and slight injuries by 45.6% in 2000. Under reporting of pedestrian fatalities is a distinct possibility (**Table 15, Figure 15**).

Pedestrian casualties have increased threefold in Tygerberg Administration since 1997. The number of reported pedestrian fatalities decreased by 24.5% in Cape Town Administration and decreased by 63.0% and 32.6% in South Peninsula Administration and Oostenberg Administration areas respectively over the same period (**Table 16, Figure 16**).

The vulnerability of pedestrians to severe injury is illustrated by the fact that in the year 2000 they accounted for 48.4% of fatalities and 44.4% of serious injuries but comprised only 29.4% of casualties. The fatality rate in the City of Cape Town is significantly higher than both provincial (45.0%) and national (38.0%) rates.

Table 17 and Figure 17 reflect the distribution of fatalities throughout the year with most fatalities occurring in the winter months of May (12.5%). The distribution is consistent with previous years.

19.3% of pedestrian fatalities occurred on Saturdays with 53.3% occurring over weekends (Friday, Saturday and Sunday). Nearly one third of all pedestrian fatalities occurred after dusk (**Table 18, Figure 18**).

Casualties for the under 18 years age group accounted for 39.1% of the total pedestrian casualties. Conversely the 18-40 years age group generated 40.4% of pedestrian casualties. (**Table 19, Figure 19**)

In 2000, 7756 drivers were injured in motor vehicle accidents, an increase of 59.6% over 1999. The most vulnerable age groups, as in the past were the 26-35 and 36-45 year old drivers who accounted for 30.0% and 25.2% of casualties respectively (**Table 20**).

(Note: Statistics relating to age groups should be treated with caution as the ages of only 61.0% of people injured in accidents were recorded.)

Analysis of casualties sustained by accident type reveals that collisions with pedestrians (29%), head/rear end (19.0%) and collisions with fixed objects (10.1%) were the types of accidents that resulted in the most number of casualties. In the case of fatalities, collisions with pedestrians accounted for 48.4% followed by head on collisions (7.5%), and head-rear end (7.1 %). These trends are similar to those of the year 1999 (**Table 21**).

Table 22 reflects the fatality rates per Administration; there is a large variation across the City with Helderberg Administration's rate more than three times that of Cape Town Administration. Oostenberg Administration, Cape Town Administration and Tygerberg Administration have shown increases of 25.0%, 23.0% and 22.0% respectively when compared with the year 1999. Helderberg Administration as shown an increase of 27.0%.

Table 23 reflects the worst pedestrian casualty locations per Administration. The comments made in the "accident trends" section of this report with respect to poor recording of accident locations are just as pertinent here.

COST OF ACCIDENTS

The economic cost of road traffic accidents results from the loss of output due to deaths and injuries as well as the physical cost due to property damage, medical and legal costs.

Table 24 and Figure 21 reflect the cost of accidents in the City of Cape Town for the year 2000. The percentage of total accident cost represented by fatal accidents was 16.9%, an increase of 3.5% over that for the year 1998.

The information contained in the draft report completed in March 2000 by the CSIR for the Department of Transport entitled “An estimate of the unit cost of road traffic collisions in South Africa for 1998” has been used to estimate the cost of road traffic accidents in the City of Cape Town. It should be noted that accident costs cannot be determined exactly and have to be estimated based on a number of assumptions. The unit costs for the various categories of accidents for both drivers/passengers and pedestrians are reflected in **Table 25**.

The cost of accidents in the City of Cape Town for the year 2000 shows an increase of 41.4% over the year 1999 largely as a result of the substantial increase in the number of non-fatal accidents.

METRORAIL ACCIDENTS

Statistics relating to accidents on the Metrorail system are reflected in **Table 26, Table 27 & Figure 22**.