# A REVIEW OF TRAFFIC AND TRANSPORTATION MANAGEMENT PLANS FROM 1995 AND 1996, AND LESSONS LEARNT FOR 2010

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#### **ABSTRACT**

In 1995 South Africa successfully hosted the Rugby World Cup. In 1996, Johannesburg successfully hosted the Africa Cup of Nations Soccer Tournament. In 2010, South Africa will host the biggest soccer tournament in the world, and once again it is expected to be a resounding success.

Taking a journey back 10 years to those events in Johannesburg, the first major international sporting events since re-admission, this paper reviews the substantial planning and on-the-ground traffic and transportation challenges faced then and lessons learnt, which challenges we will again face in 2010, however now with the benefit of experience, hindsight, better infrastructure and a willingness to succeed.

## 1. INTRODUCTION

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Taking a journey back 10 years to those events in Johannesburg, the first major international sporting events since re-admission, this paper reviews the substantial planning and on-the-ground traffic and transportation challenges faced then and lessons learnt, which challenges we will again face in 2010, however now with the benefit of experience, hindsight, better infrastructure and a willingness to succeed.

So what were those "behind-the-scenes" challenges from 1995 and 1996? The Minibustaxi industry was used in Park-and-Ride operations for the first time; 240 VIP buses had to be accommodated at the Rugby World Cup final; enforcing traffic management plans for the first time, and more. And especially what happed on the ground at events, i.e. a taxi blockade; spectator vehicles parked four deep against the kerb; government ministers ignoring one-way systems; famous sports personalities obstructing dedicated lanes; and the like.

This paper presents the extent of the planning done prior to these two events, and highlights the lessons learnt to be considered leading up to 2010.

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#### 2. THE ELLIS PARK PRECINT AND THE 1995 RUGBY WORLD CUP

In 1995, South Africa hosted the Rugby World Cup, the first major international sporting event since democracy in 1994. One of the stadia at which matches were played was the Ellis Park Stadium in Johannesburg, including the Rugby World Cup Final, played in June 1995. In the early 1990's when the construction of the Johannesburg Stadium and the upgrading of the Ellis Park Precinct began, and with the Rugby World Cup in mind, the then Greater Johannesburg Transitional Metropolitan Council (GJTMC) recognised the impact that these projects would have on the accessibility of the Precinct, and decided to investigate and implement traffic and transportation management plans for the various stadia and the Precinct as a whole.

Contained within the Precinct are the Ellis Park Stadium (65 000 seats), where some of the Rugby World Cup matches were played, as well as the Johannesburg Stadium (37 000 seats), the Standard Bank Arena (8 000 seats) and the Ellis Park swimming pool. Prior to this, and because there were no alternatives, the streets surrounding the Precinct were jam-packed with parked vehicles on match days, and most businesses and industries sold their off-street parking areas to these spectators. At the stadium itself was only limited VIP parking.

As part of the Precinct grade, traffic calming measures were introduced into the roadway by way of roundabouts and speed humps. On match days, those roads that pass through the Precinct were closed to private vehicles, and the Precinct was pedestrianised, allowing the free flow of pedestrians around and between the stadia. An informal trading management system was established with numerous informal trading stalls scattered throughout the Precinct. These stalls were hired out to informal traders on match days.

# 2.1 The roleplayers and their responsibilities

The implementation of traffic and transportation management plans required the involvement of numerous agencies and roleplayers. Many of the roleplayers involved at the Ellis Park Precinct were Greater Johannesburg Transitional Metropolitan Council (GJTMC) Departments and included Metropolitan Traffic; Metropolitan Bus Services; Metropolitan Public Safety; Metropolitan Infrastructure and Technical Services; Metropolitan Planning, Urbanisation and Environmental Planning; Metropolitan Sport; Metropolitan Parks, Botanical Garden, Nature Reserves, Cemeteries and Zoological Gardens and Metropolitan Corporate Services.

The non-Council roleplayers included Metro-Wits Rail Services; the South African Police Services; the Johannesburg Stadium Management; the Ellis Park Stadium Management and the Standard Bank Arena Management.

A critical roleplayer, who acted as a liaison between and co-ordinator of all the above roleplayers with regard to the transportation and traffic management plans for the Ellis Park Precinct, was the Operations Co-ordinator. The Operations Co-ordinator had a working knowledge of all the aspects pertaining to the traffic and transportation management plans, including the operations of the Park-and-Ride service, as well as all the related aspects that needed to be addressed prior to and at each match.

Metropolitan Traffic was responsible for the controlling of all traffic in and around the Precinct, including points duty at key intersections, the manning of booms, the closure of roads, the flipping-over of the numerous event-specific traffic signs, etc. They were also responsible for deploying pointsmen to the Park-and-Ride sites after each match.

The operating of the Park-and-Ride service to the Ellis Park Precinct was the responsibility of Metropolitan Bus Services (MBS), and Metropolitan Public Safety was responsible for providing security personnel at the various Park-and-Ride venues. Metropolitan Corporate Services assisted Metropolitan Sport with marketing of the Park-and-Ride service and the traffic management plans implemented on match days (road closure times, etc.)

Metro-Wits Rail Services was responsible for operating a train shuttle service to the Ellis Park Station from the Johannesburg Station. Also, all Metro train services passing through the Ellis Park Station, stopped at the station on match days. The South African Police Services (SAPS) was responsible for law enforcement in and around the Ellis Park Precinct, and on the Park-and-Ride routes.

# 2.2 The traffic management plan implemented for the Ellis Park Precinct

The traffic management plan that was implemented was formulated in close consultation with Metropolitan Traffic, who provided valuable input regarding 'typical' traffic behaviour at major sporting events at the Precinct. This also ensured their buy-in as they had to implement and enforce the plan on match days. The traffic management plan that was put into place is shown in Figure 1.

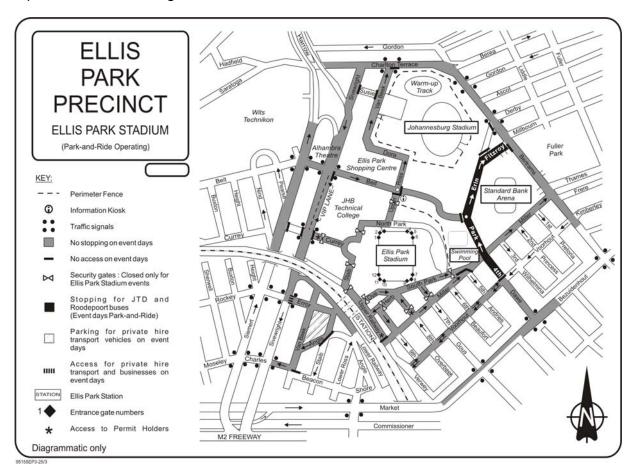


Figure 1: The Ellis Park traffic Management Plan

In support of the plan, the variable message signs that were located on the freeways around Johannesburg were also used to promote the use of the Park-and-Ride service. Park-and-Ride direction signs were also erected at all the strategic intersections around each Park-and-Ride venue. Press releases were distributed to the media prior to each event, further promoting the Park-and-Ride service.

Before, during and after every match, the traffic management plan was continually monitored, as were the Park-and-Ride services, in order to ensure that any problems that arose were addressed timeously. And there were many "behind-the-scenes" challenges! Motorists parking or stopping in places that obstructed key traffic corridors had to be quickly and effectively removed, including well known sports personalities; pointsmen preferring to eat lunch instead of directing traffic; private-hire buses parking in the Park and Ride bus lanes, obstructing their free flow movement; and so on. All these unanticipated incidents highlighted the importance of having on-the-ground, quick thinking, solution focused, strategic personnel roaming the vicinity of the event at all times, to address these incidents before they could escalate.

#### 2.3 The transportation management plans for the Ellis Park Precinct

The transportation management plans for the Ellis Park Precinct were designed for all the modes of public transport operating to the Precinct on match days, including buses, minibus-taxis, trains, private hire vehicles and metered-taxis. The major focus of the bus operations to the Precinct was the Park-and-Ride service operated by Metropolitan Bus Services (MBS). The transportation management plans were closely linked to the traffic management plans as it was the latter plans that ensured the priority movement of the public transport vehicles to, within and from the Precinct on match days.

Along all the main pedestrian thoroughfares within the Precinct, and at all the major exits from the stadium, public transport direction signs were erected, directing spectators leaving the stadium to the Park-and-Ride service, the private hire bus-rank, the Ellis Park Station and the metered-taxi rank. These signs facilitated the free-flow of pedestrians through and out of the Precinct after a match.

# 2.3.1 The park-and-ride service operated by MBS

In identifying Park-and-Ride venues, every attempt was made to utilise Council-owned property. However, to locate them more strategically, some of the Park-and-Ride venues were located on private property, and payment agreements were negotiated between these venues and MBS. Using private property was not found to be suitable as on some match days those venues had arranged their own events and so could not accommodate the Park-and-Ride vehicles, and therefore a consistent service could not be provided.

Four Park-and-Ride routes operated. These routes were colour-coded and included the red route which ran from Marks Park in Emmarentia with a pick-up point en route at the Garden Court Holiday Inn in Milpark; the yellow route which ran from the University of the Witwatersrand with pick-up points en route at the Devonshire and the Parktonian Hotels in Braamfontein, and the Johannesburger Hotel in Joubert Park; the white route which ran from the Rand Stadium near Turffontein with pick-up points en route at the Ghandi Square Bus Terminus in the Johannesburg CBD and the Carlton Hotel also in the CBD; and finally, the blue route which ran from Bezuidenhout Park in Dewetshof near Cyrildene. Permanent signs, indicating the pick-up locations, were erected outside each of these hotels and other pick-up points on route. All the buses operating on the Park-and-Ride routes were identified by a plaque of the relevant colour, placed on the front of each bus, specifying that bus's destination. The intention of these plaques was to enable passengers to quickly, and confidently, identify and board buses after an event.

The bus routes had been specifically identified as the routes with the least traffic congestion, both before and after a match. Although the routes were in some cases a little longer in distance and were indirect, it was on these routes that the buses kept moving

and did not get caught in traffic congestion. All the bus routes entered the Ellis Park Precinct from the southern side as this route proved to be the least congested of all the routes into the Precinct, and enabled easy access for the buses into the dedicated bus route through the Precinct. The Park-and-Ride venues and their routes to the Ellis Park Precinct were clearly mapped and the bus drivers were trained on the routes.

A return ticket for the Park-and-Ride service cost R5,00 per person from all the Park-and-Ride venues. Tickets were bought at the Park-and-Ride venues, either from a hand-held ticket dispensing machine operated by a MBS official, or from ticket selling vans that MBS sometimes placed at the Park-and-Ride venues. The latter is preferred as it facilitated the quick loading of the buses with tickets only being checked, versus issued, on boarding.

A one-way bus corridor ran through the Precinct on event days. The buses dropped off their passengers at the designated drop off points along these corridors. This ensured that passengers knew exactly where to find their correct buses after the event. Permanent flipsigns, colour-coded according to the colours of the Park-and-Ride routes, were designed to both indicate the Park-and-Ride pick-up points in the Precinct, and to direct spectators to the various other Park-and-Ride pick-up points in the Precinct.

The operating times of the service could easily be determined for weekend matches, however for week day matches, because MBS operated its peak-period municipal bus service, the Park-and-Ride service could only begin at 18:30. It is therefore suggested that for week-day events, MBS should operate an early afternoon Park-and-Ride service, prior to its peak-period. This will then enable those spectators who wish to get to the Precinct early, an opportunity to use the Park-and-Ride service.

# 2.3.2 Minibus-taxi operations to the Ellis Park Precinct

In the run-up to the 1995 Rugby World Cup, and with the Metropolitan Bus Service operating a successful and well utilized Park-and-Ride service, discussions started with the minibus-taxi industry to piggy back onto the existing service and thereby ensure their participation and economic benefit from an event like the Rugby World Cup. Negotiations began with identifying the key role players within the industry, this being restricted by the operating permits in existence at the time.

Many scenarios and ideas were debated until it was agreed that the taxis would operate together with the bus service, from all existing and established Park-and-Ride venues. It was also agreed that fares would be paid directly to whichever service the passenger chose to use, and a R5 return fare applied, as it did for the bus service. The same tickets were used for buses and taxis.

Some problems arose when taxis were inspected to assess their suitability to provide a public transport service to international and local spectators. Fears were that the use of unroadworthy taxis, if involved in an accident, would result in lawsuits and negative publicity. This inspection process sparked an outcry from some of the taxi drivers whose vehicles were identified as unroadworthy. Since they had not been privy to the planning discussions, they felt marginalized at being excluded from being part of the Park-and-Ride service, and protested. The situation escalated, eventually being resolved the night before the first match was due to be played at Ellis Park.

With the taxi recapitalization process moving ahead, the future incorporation of the minibus-taxi industry into formal Park-and-Ride type services, should be made easier.

## 2.3.3 Train operations to the Ellis Park Precinct

The Ellis Park Precinct is fortunate in that a train service runs along its south-western boundary and stops at the Ellis Park Station. Due to a train's dedicated track, the greatest advantage that a train service offers is that it cannot get caught in a traffic jam, whereas road-based modes are always susceptible to this. At the time of the initial implementation of the traffic and transportation management plans for the Ellis Park Precinct in 1994, and before the current redevelopment of the Johannesburg Station had begun, Metro-Wits Rail Services ran train shuttle services and provided special rugby trains, not only from the Johannesburg Station, but also from stations on the East Rand. Unfortunately, due to the generally negative public perception of trains in Johannesburg as a result of the violence on trains at that time, the services were very under-utilised and thus were not continued. In future, every effort should be made to maximise the provision and utilization of a train Park-and-Ride service, so as to lessen traffic congestion on the surrounding roads.

# 2.3.4 Private hire transport vehicles

With the re-development of the Ellis Park Precinct, some work was also done to upgrade the bus-rank to the south of the Ellis Park Stadium. It was here that private hire transport vehicles parked on match days. The advantages of using this rank were that private hire transport vehicles had easy access to the rank and the M2 freeway, it was located right on the border of the Precinct (spectators needed only to walk through the pedestrian tunnels under the Ellis Park Station and they were in the Precinct) and most importantly, these vehicles could park exactly where they dropped-off their passengers, so their passengers knew where to find their transport after a match.

For the Rugby World Cup Final itself, over 240 private hire buses and tour operators had to be accommodated, and separate, special arrangements were made. These buses were allocated a dedicated drop off zone where passengers alighted, and the buses were then parked at a Council owned parking facility a few kilometres from the Precinct. After the match, radio communication was used to call buses as and when their passengers required them. This proved very successful.

## 2.3.5 Metered-Taxi Operations to the Ellis Park Precinct

Experience had shown that very few people arrived at the Precinct in metered-taxis. It was primarily after an event that this mode of transport was required. Therefore, the metered-taxi industry was accommodated in the traffic and transportation management plans by providing a ranking area for metered-taxis on the southern side of Beit Street, between Sivewright Avenue and Upper Ross Street (which is closed-off on event days). This area was central to the entire Precinct and, being located within the traffic cordon, provided a secure area for both the metered-taxi drivers as well as their passengers.

# 2.4 Funding of the park-and-ride service and related activities

At the time of the Rugby World Cup, each GJTMC and non-Council roleplayer was responsible for the costs of providing its particular aspect of the overall service, yet only MBS and Metro Rail had a means to potentially recover their costs from the fares they collected from passengers using the Park-and-Ride services. Since budgeting for the provision of all these services was made difficult due to the ad-hoc nature of events, especially concerts, staged in the Precinct prior to and after the World Cup, many of these services were provided on shoe-string budgets, with most Council Departments having to re-direct funds to the provision of their service. This resulted in Departments not allocating sufficient manpower and other resources to the operations of the services. The services

were therefore, on some occasions, not of a standard that they should have been. Whatever the arrangements are for 2010, it must be ensured that there is adequate funding for all traffic management and transportation services, to ensure these services are not compromised in any way.

## 2.5 A key success factor

A key factor that led to the successful implementation of the traffic and transportation measures for the Rugby World Cup at Ellis Park was that the plan was put into operation at least one year prior to the World Cup matches. Through extensive publicity and marketing, the local spectators were made aware of the traffic management measures and also utilized the Park-and-Ride service before the foreigners arrived to also use the service. This allowed the system to be properly tested on match days and with the local spectators being familiar with the service before the World Cup, enabled the smoother operation of the service for the World Cup itself. This ensured adequate planning for events, but the ad-hoc, random nature of unanticipated occurrences on event days meant having a knowledgeable, solution focused person on-the-ground, walking the streets, is critical.

# 3. THE AFRICA CUP OF NATIONS IN 1996 AT THE FNB STADIUM, JOHANNESBURG

In 1996, when South Africa hosted the Africa Cup of Nations Soccer Tournament, it was held in Johannesburg at the FNB Stadium (now Soccer City). This was South Africa's first international soccer tournament since readmission.

The primary difference between the Ellis Park Precinct and the FNB Stadium from a traffic and transportation viewpoint, was that while Ellis Park spectators preferred to use their private vehicles to get to matches, at the FNB Stadium, public transport played a significant role. While there were still many vehicles coming to the matches at FNB Stadium, the wide open spaces around the stadium allowed for ample parking. Its location adjacent to the Soweto Highway and the Pat Mbatha Bus and Taxi Expressway, and primarily being surrounded by a four lane road network, made traffic management planning measures simpler to implement than at Ellis Park. The unexpected challenges, however, occurred on match days!

# 3.1 Roleplayers and their responsibilities

Since the Rugby World Cup Final was held in June 1995, and the Africa Cup of Nations in January 1996, immediately after the rugby tournament was completed, the same team of roleplayers switched focus to the FNB Stadium. Roles and responsibilities effectively remained the same.

## 3.2 The Traffic Management Plan Implemented for the FNB Stadium

A network of one-way roads was implemented to better channel traffic movements. On the four-lane NASREC Road that is located to the east of the stadium, a three-lane inbound and one-lane outbound configuration prior to the matches was reversed after the matches to facilitate easier arrival and departure respectively.

A new on-ramp onto the Soweto Highway was constructed. Traffic movements in general were channelled to the nearest freeway, being that the M1, N1 or the Soweto Highway.

Unlike at Ellis Park, a large concentration of vehicles parked in the immediate vicinity of the stadium, making adherence to the one-way system vital in order to dissipate the sudden traffic demand at the end of a match. This at times proved challenging as the traffic management system was only implemented a few weeks before the tournament began, so spectators were not familiar with the system on match days. Because of old travel habits, some motorists, including a government minister, forced their way up one-ways in the wrong direction, or drove in contraflow lanes because they were empty, versus the congested lanes they were being restricted to.

This all highlighted the need to better understand the soccer spectator culture versus rugby spectator culture for example, the need to properly communicate through all possible means timeously, and the need to implement plans long before actual event days, so that people have time to become accustomed to the plans, realise their benefits, and the plan can be monitored, revised and refined on an ongoing basis.

Another scenario that presented itself was spectators parking their vehicles four deep against the sidewalk, thereby blocking what should have been open roads.

For 2010, it is advisable to establish a pedestrianised cordon around the stadium into which only public transport, emergency and VIP vehicles are allowed. Spectators should be forced to park their vehicles further away, and to walk. This facilitates the easier disbursement of traffic as the peak congestion period is spread as spectators would need to walk varying distances to their vehicles. On-street parking should be prevented all together, to ensure roadways remain open to traffic.

## 3.3 The transport management plans for the FNB Stadium

The minibus-taxi industry was allowed to operate as they had done for special events for many years prior to the Africa Cup of Nations, except that they were obliged to adhere to the one-way system in place. A vast majority of the taxis simply stopped and waited for passengers on the Pat Mbatha Expressway and the Soweto Highway in both directions. In spite of the risk to their safety, spectators flocked to these taxis after events.

MBS operated a Park-and-Ride service from Gold Reef City only. This was fairly well utilized and at least provided an option for spectators.

Metro-Wits Rail operated a shuttle train service to the NASREC Station, which is located to the south of the stadium in easy walking distance via a wide bridged walkway. Unfortunately this service was not well publicised and therefore was under utilized. For 2010, a train Park-and-Ride service, properly planned, scheduled and promoted, is essential.

Private hire buses were allocated a dedicated parking area adjacent to the stadium.

#### 4. CONCLUSION

The 1995 Rugby World Cup and the 1996 Africa Cup of Nations provided Johannesburg with the opportunity to formulate, implement, and monitor traffic and transportation management plans to accommodate the arrival and departure of spectators en masse from the Ellis Park Stadium and FNB Stadium (Soccer City) respectively. The spectator cultures and customs of both events were different, enabling significant lessons to be learnt leading up to the 2010 Soccer World Cup, which will bring these two groups together at the same event.

By 2010, Johannesburg will have Gautrain, better stadium infrastructure, a better understanding of traffic and transportation requirements, and possibly a greater will to

succeed, all of which bodes well for a very successful hosting of the tournament. However, the need for quick thinking, solution focused personnel to be on-the-ground at events, who are able to quickly and effectively address ad-hoc, random occurrences, is critical, otherwise even the best formulated traffic and transportation management plans can fail.

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