



CITY OF CAPE TOWN 2010 FIFA WORLD CUP

HOST CITY TRANSPORT OPERATIONS PLAN

CAPE TOWN INTERNATIONAL AIRPORT VENUE TRANSPORT OPERATIONS PLAN

VERSION 3



15 September 2009





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FOREWORD

The 2010 FIFA World Cup (2010 WC) Host City Transport Operations Plan (HCTOP) and Venue Transport Operations Plans (VTOPs) have been developed for the City of Cape Town and are issued to the Department of Transport (DoT), the Local Organising Committee (LOC) and the Project Management Team (PMT) for information and comment.

These plans have been compiled in conjunction with the Provincial Government Western Cape's Provincial Transport Operations Plan (PTOP), which is issued separately.

The deliverable comprises the following separately bound documents:

1. Host City Transport Operations Plan – Version 4
2. Green Point Stadium Venue Transport Operations Plan – Version 3
3. CBD and Fan Park Venue Transport Operations Plan – Version 3
4. Cape Town International Airport Venue Transport Operations Plan – Version 3
5. Bellville Public Viewing Area – Version 1
6. Swartklip Public Viewing Areas – Version 1
7. Athlone Public Viewing Area – Version 1
8. Final Draw Transport Operations Plan (TOP) – Version 3

The record of deliverables to date is as follows:

- 30 April 2008: Submission of Version 1 of the HCTOP to the DoT for comment. – **Completed**
- 28 May 2008: Submission of a Summary of the HCTOP to the DoT for comment. – **Completed.**
- 20 October 2008: Submission of Version 2 of the HCTOP and Version 1 of the VTOPs to the DoT for comment. – **Completed.**
- 12 December 2008: Submission of Version 3 of the HCTOP and Version 2 of the VTOPs to the DoT, LOC and PMT for information and comment. – **Completed.**
- 15 September 2009: Submission of the documents listed above to the DoT, LOC and PMT for information and comment. – **This deliverable.**

It is requested that all comments are forwarded to either Peter Sole of the City of Cape Town or Hein Stander of the Green Point Stadium 2010 Transport Consultant Team. Contact details are provided on the Document Control Sheet.

2010 FIFA WORLD CUP - HOST CITY TRANSPORT OPERATIONS PLAN

CAPE TOWN INTERNATIONAL AIRPORT VENUE TRANSPORT OPERATIONS PLAN

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1 INTRODUCTION

1.1 Objectives of the Venue Transport Operations Plan (VTOP)

The Cape Town International Airport (CTIA) will serve as the gateway into Cape Town for the majority of soccer fans, functionaries and dignitaries visiting the city during the 2010 FIFA World Cup® (2010 WC), or the “Event”.

Air travel will have a prominent role in moving visitors into, out of and internally around the country during the event. This will be especially true for Cape Town, which is one of the three international airports in the country, and is located 8 hours drive from the nearest other stadium in Port Elizabeth, and around 1 500 km away from the main cluster of stadiums in the Gauteng area.

The airline capacity will be dramatically increased to accommodate the higher demand for air travel during the 2010 WC period. Likewise, capacity of the landside transport system will have to be increased to distribute passengers onward after landing and returning them to the airport, especially given the pro-public transport strategy being adopted by Host City Cape Town, to transport World Cup spectators.

The main purpose of the CTIA VTOP is as follows:

- To project the land-side transport requirements during the period of the 2010 WC;
- To determine the extent to which these volumes and procedures exceed the regular service requirements expected in June 2010, and thus require a temporary overlay;
- To prepare a detailed plan for effectively servicing these demands in line with the overall policy objectives contained in the HCTOP and in accordance with Airports Company of South Africa’s (ACSA) objectives, and to align these with the future airport access transport vision held by the City and the ACSA;
- To be the single reference document which sets out the strategy and procedural approach for airport access during the 2010 WC that has full buy-in from all stakeholders.

Other planning disciplines within the City and by other stakeholders, like safety & security and general event management, is analysed insofar as it impacts on the planned transport system. The VTOP planning approach and the documentation prepared will be continuous and progressive commencing at the outline stage, previous version, and moving through to a detailed series of procedural documents.

1.2 Venue Specific Information

The VTOP is an evolving plan that changes as decisions are taken and agreement is reached by the stakeholders in the planning process. Each version of the VTOP should therefore be read as a record of agreements reached as well as a description of outstanding issues and the processes and decisions pending, on the date of release.

The list of important issues that are currently being discussed and which require further analysis and agreement include:

- Formal agreement on planning parameters, particularly peak hour landside passenger demands
- Agreement on the management system used to coordinate passenger and vehicle movements
- Responsibility for operations during the Event, including the provision of event specific volunteers & paid staff
- Coordinate traffic control efforts at the airport with Metro police, SAPS and Provincial Traffic
- The layout, facilities and utilisation of the holding areas
- The need to provide space for scheduled services to destinations other than the Main Transport Hub
- The requirements of the City’s 2010 communication at CTIA – including information desks, branding and signage
- The accommodation of General Aviation passengers
- The operation of 2010 air freight through the airport
- The requirements and plans to accommodate Special Needs Passengers
- Finalise provision for Emergency and Disaster Management services
- Ensure the provision and management of adequate signage: Responsibility to provide, maintain, remove
- Coordination between passenger arrivals and flight departures after a match in the Green Point Stadium (GPS)

In order to fully understand the system of transport services discussed here, this VTOP should be read in conjunction with Version 4 of the Host City Transport Operations Plan (HCTOP), which is bound separately.

1.2.1 Location of the Airport

The location of the airport in the Cape Town Metropolitan Area as well as the Protocol and Alternative Routes to the GPS via the CBD are shown in **Figure 1**. The distance to the CBD along the Protocol Route is approximately 19km, while it is approximately 50km along the alternative route.

1.2.2 Layout of the Airport

ACSA, custodians of the CTIA, fast-tracked the general upgrade programme of the Airport to be ready for the passenger numbers anticipated for the event, with the result that major construction projects are currently underway at the Airport. These include expansion of the Terminal Building, the second multi-storey parking garage (Parkade 1) as well as the Internal Road Network. The description of the operational components of the VTOP is in terms of the layout that is expected to be constructed under the prevailing contracts, as shown artistically in **Figure 2**, and in more detail in **Figure 3**. Construction of all components is due to be completed by April 2010.



Figure 1: Location and Protocol Routes to GPS

1.3 VTOP Boundary

The boundary of the airport for the purpose of the VTOP is the terminal buildings (inclusive) in the east, the freight warehouses in the north, the general aviation area in the south and Borchers Quarry road to the west.



Figure 2: Layout of Airport Precinct

2 CO-ORDINATION

2.1 Transport Co-ordination Organogram

Figure 4 shows the Management Structure that will manage transport operations in the Host City Cape Town during the Event. The organogram shows how the management of the landside transport services at the Airport fits into the overall management structure.

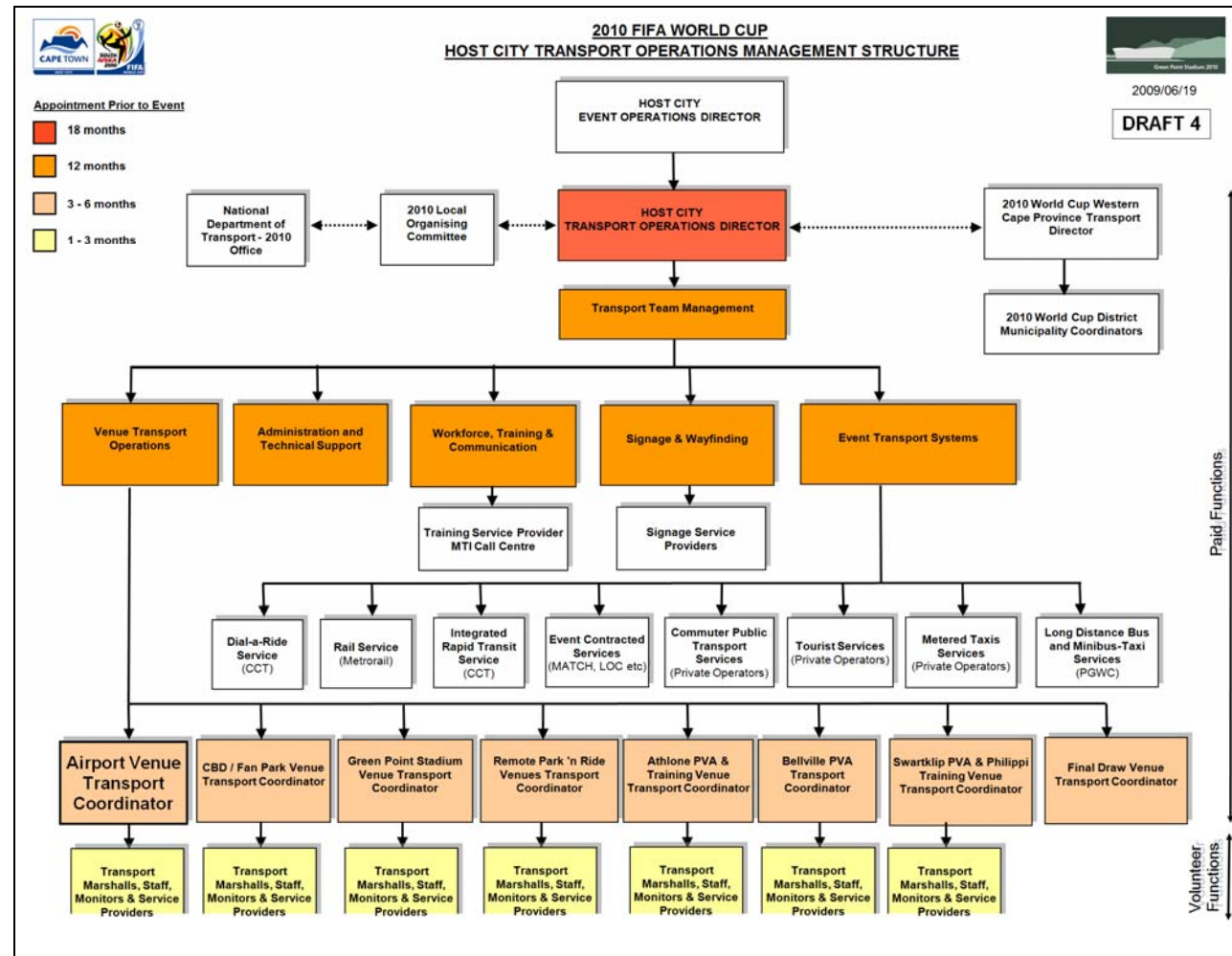


Figure 4: Host City Transport Operations Management Structure

The Operations Management Structure required at the airport is discussed in Section 4.13.

3 WORLD CUP SCENARIOS DETAILED IN THIS VTOP

3.1 Match and Non-match Days

The Cape Town International Airport is expected to operate at consistently high levels for the duration of the Event. Whereas the influx of international visitors is expected to decline towards the middle of the first round, domestic travel would be continually high as fans follow their teams around the country until at least the end of the first round.

It is believed that there would not be significant differences between arrival and departure patterns at the airport on match or non-match days. This "landside transport operational plan" rather aims to accommodate all permutations of arrival and departures in different modes. For this reason, it is important to understand both the passenger capacity of the airport and the variation in transport demand within this capacity.

3.2 Airport Capacity Analysis

The Department of Transport determined the constraints in the aviation sector at each airport that will affect the event. The three limiting factors that were identified are:

- Terminal building capacity at each airport
- Runway capacity at each airport
- Airline capacity in South Africa

3.2.1 Terminal Building

Table 3.1 shows the hourly passenger capacities of the new terminal buildings at the CTIA. This capacity is defined by aspects including baggage handling systems, and the service rates of processes like check-in and customs.

Table 3.1: Airport Terminal Maximum Hourly Passenger Capacities

Terminal	Arrivals (per hour)	Departures (per hour)
International Terminal	1 250	1 250
Domestic Terminal	2 400	2 400
TOTAL	3 650	3 650

3.2.2 Runway Capacity

Table 3.2 shows that 20 Air Traffic Movements (ATM's) with typical airplane distribution is required to carry the capacity of the terminal building in one direction. The runway capacity at CTIA exceeds 20 ATM's per direction per hour, which means that the terminal capacity will govern the utilisation of the runway. Spare capacity on the runway can be used by freight and chartered flights.

Table 3.2: Passenger Numbers for runway Capacity

Airplane Type	Movements	Passengers/Plane	Passengers
Wide Body	4	350	1 400
Narrow Body	16	140	2 240
TOTAL	20	-	3 640

3.2.3 Airline Capacity

The required airline capacity has been determined in collaboration with the airline industry currently operating in South Africa. A model was developed to optimise the number of planes, capacities at all airports and capacities of routes between those airports based on the estimated demand for trips during the event. **Figures 5 (a) and (b)** shows the estimated domestic arrival and departure demand at the CTIA during the event.

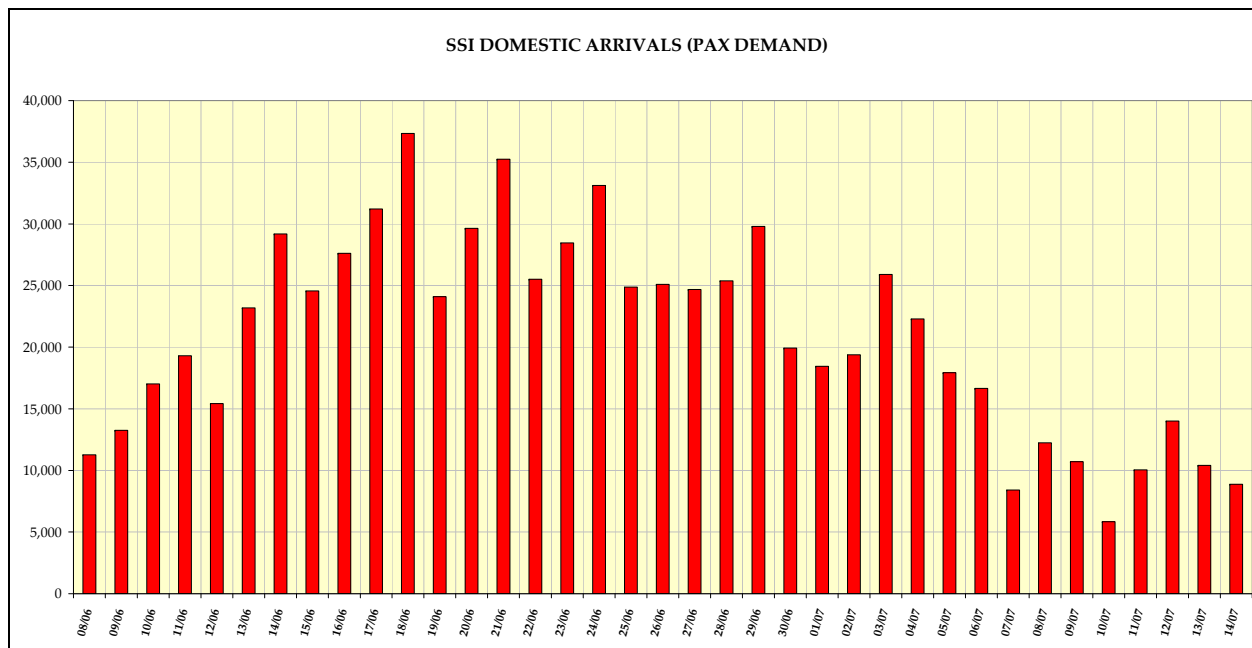


Figure 5 (a): CTIA – Estimated Domestic Arrival Passenger Demand

Higher passenger volumes are expected during the first half of the event, exceeding 30 000 pax per day for about 5 days. The arrivals is estimated to peak at about 37 000 pax on 18 June, which is halfway through the Group Matches section of the tournament. In the same period, international arrivals is estimated to exceed 2 000 pax per day. The resultant total of almost 40 000 passengers in the peak day equates to almost 1 700 pax per hour. Realistically though, the airport is likely to operate at levels of between 3 000 and 3 650 pax/h for about 10 hours in the day, easing slightly towards the 20h30 kick-off of the local match.

These estimates will be significantly refined subsequent to the final draw in December, when it will be possible to match the accommodation bases of fans with the stadiums in which their teams will play on particular days. Departure flows show similar peaking characteristics, but peaks typically do not coincide with the peaks on arrival.

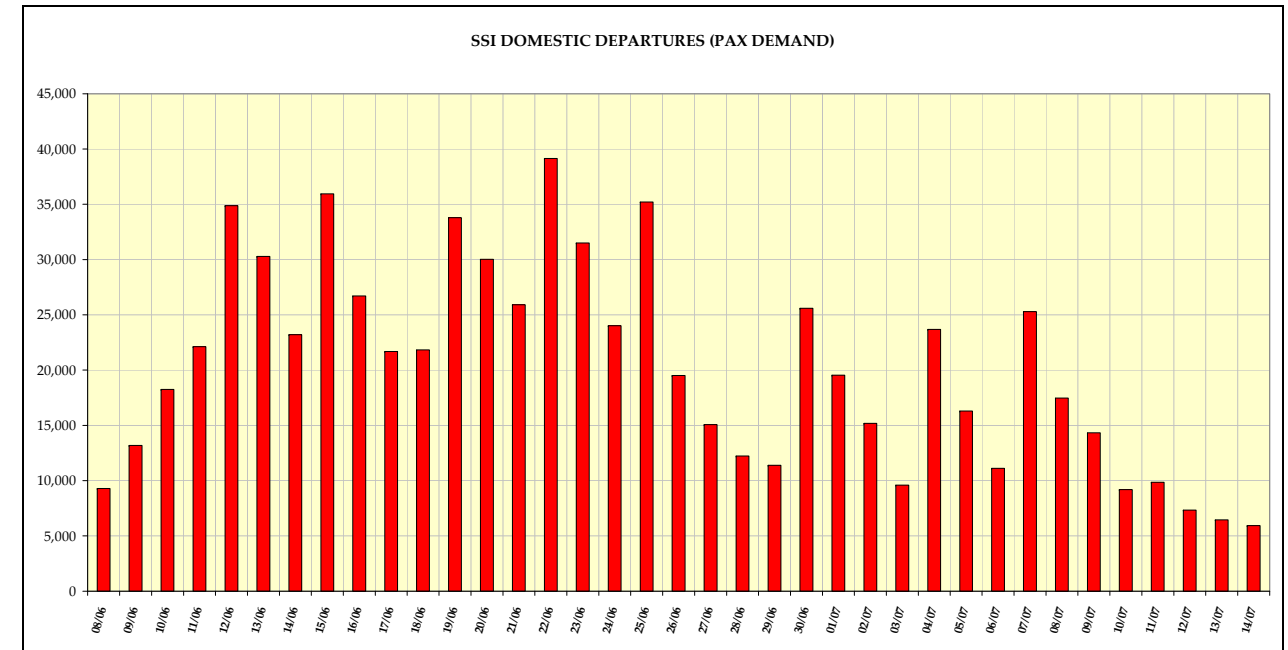


Figure 5 (b): CTIA – Estimated Domestic Departure Passenger Demand

Figure 5 (c) shows the distribution of total estimated passenger demand flows through Cape Town International Airport during the Event for domestic and international arrivals and departures. It shows how the airport will operate at levels of about 65 000 passengers per day for almost 2 weeks up to the end of the knock-out round. This should be put into the perspective that the airport currently accommodates less than 20 000 passengers on a peak day.

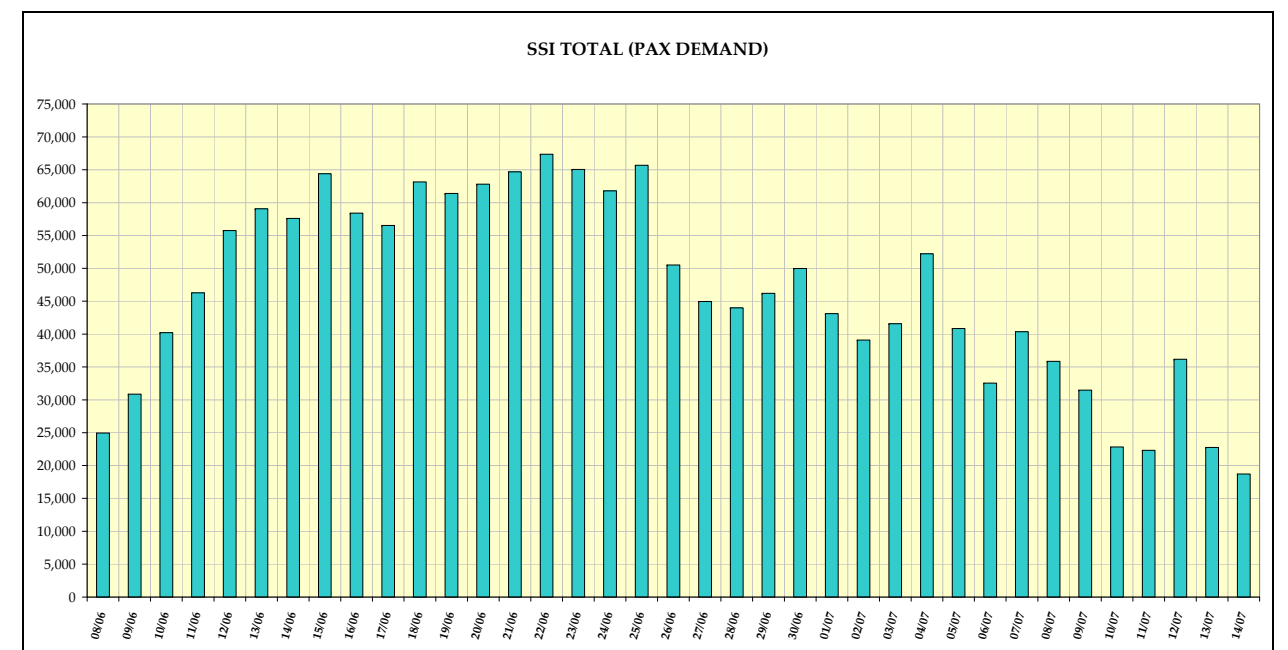


Figure 5 (c): CTIA – Projected Total Passenger Demand

Resources and systems on both air and landside will have to operate at levels that far exceed current experience. The risk of disruption is therefore high and requires very detailed planning and training to minimise the likelihood and impact of any disruptions.

3.2.4 Capacity at CTIA

The design capacity of the CTIA to carry passengers in either direction is taken as 3 650 pax/h. Given the projected demand volumes it will be necessary to design the landside transport system so that it can cope with this peak flow in each direction, and operate at levels exceeding 3 000 pax/h for extended periods.

3.3 Landside Capacity Analysis

While the arrival and departure flows could peak at the airport capacity of 3 650 pax/h, the impact on the landside transport system would differ significantly for each direction.

3.3.1 Departures

The flow of passengers to the airport is likely to peak in the hours immediately after a local match, when a large number of people are likely to depart to accommodation centres outside of Cape Town. This scenario is described as follows:

A maximum of 3 650 persons can depart from the airport in any one hour after a match. Departures will occur in about 20 planes with 150 to 300 passengers each to a variety of destinations. Should two or three times the airport's hourly capacity need to depart after a match, the airport will have to accommodate abnormally large volumes of people in the terminal building. Alternatively, arrivals at the airport should be managed to ensure queuing occurs in the MTH and the passengers can board a plane as they arrive at the airport. This will further be critical once flights start to arrive back in Cape Town within the second peak hour after a match played elsewhere in the country.

The sequence of passenger arrivals at the airport, and hence passengers departing from the Main Transport Hub in the CBD, is important. All modes would be employed to transport this volume of people, including all travel groups, to the airport during the peak. Hospitality guests that are being entertained after a match will not form part of the first peak hour, but could be affected by a subsequent peak if the landside transport system gets saturated.

The detailed analysis and testing of scenarios to develop the operational plan for this challenge is not complete, and will be expanded upon in the next version of this VTOP.

3.3.2 Arrivals

The demand to move from the airport in various modes is likely to differ throughout the event and even throughout a day. Since there is not enough information to accurately estimate the size and timing of the different demand peaks, the following three modal bias scenarios are being planned for:

- A private and rental car bias when more local and regular travellers arrive;
- A Coach and Shuttle services bias on or around match days when tour groups would be the predominant movement;
- A bias towards IRT and other event Public Transport services when general spectator numbers peak.

The different modes will operate from different parts, or transport areas, at the airport, and therefore each area needs adequate capacity to deal with its particular peak demand. **Table 3.3**

shows the estimated extent of volumes per mode that are being planned for in terms of the different biases, as well as the combined capacity of the landside system.

Table 3.3: Peak modal demand scenarios (pax / mode)

Mode	Private bias	PT bias	Coach bias	Max pax / mode
Private car	1 600	1 200	1 000	1 600
Rental car	500	350	300	500
IRT	400	800	400	800
Scheduled PT	250	400	250	400
Coach / shuttle	900	900	1 700	1 700
Design Volume	3 650	3 650	3 650	5 000

Table 3.3 shows that the capacity of the landside transport system will exceed the capacity of the airport when each mode group is able to accommodate peaks with a bias towards itself.

4 TRAFFIC AND TRANSPORT MANAGEMENT

4.1 Variations in Flow Rate throughout Event

While flight schedules will be determined to meet the expected demand, sale of flight tickets will be in accordance with the advertised schedules. Travelling to and from the airport will therefore be governed mainly by the availability of seats on the scheduled flights. Daily variations will occur throughout the Event, which means that the landside operations at the airport will have to remain adaptable and responsive.

The following sections will therefore apply to traffic and transport arrangements for both match and non-match days and include event and non-event related travel.

4.2 Travel Groups

All persons landing at the airport are broadly classified as being either dependent or independent travellers. Independent travellers would make use of private cars, rental cars or public transport. These travellers are guided by means of signage directly to their vehicles or to an information desk where more information about a service can be obtained. The dependent travellers are further classified in accordance with the specific travel needs of each group.

The HCTOP distinguishes between the following Special Travel Groups, or STG's:

- 1) VVIP's, or state protocol passengers;
- 2) FIFA & LOC VIP's (Rights holders);
- 3) FIFA & LOC Staff;
- 4) Players, Team Management and Match officials;
- 5) Media
- 6) Official Partner and Supplier rights holders (MATCH clients) ;
- 7) Corporate hospitality and Non-hospitality Rights holders (MATCH clients);
- 8) Tour operator package;
- 9) Service staff;
- 10) Family and friends, Flag bearers, Mascots, Ball boys.

The provision of a full transport service for the sub-groups 1) to 3) is the responsibility of FIFA's Local Organising Committee (LOC). It is also likely that the LOC would have to ensure transport services are available for the media. Transport for Sub-groups 5), 6) and 7) will also be largely via chartered transport but this will either be arranged privately or through MATCH Transport Services (see **Section 4.3.3**).

The provision of an adequate number of bus embayments where passengers will be picked up from forms part of this planning process. These services will typically be provided by tour operators and charter service companies, using a combination of coaches (40 to 60 seats) and shuttle buses (15 to 35 seats).

The general public, including local and international independent spectators and non-event travellers, will make use of the following available private, semi-public and public transport modes.

- Own car (incl. meet & greet)
- Scheduled public transport
 - Shuttle to CBD (Integrated Rapid Transit, IRT)
 - Private shuttles to accommodation
- Dial-a-Ride services for Special Needs Passengers
- Metered Taxis
- Rental cars

The most significant change to the transport system serving the Airport will be the introduction of an IRT service. This service would provide a level of public transport that will change the nature of travel choices and hence trip generation to the airport. This service is aimed at the regular airport user, including visitors and local residents.

In addition to the IRT, which will only provide a link to the CBD during the Event, private shuttle services could be provided to serve destinations with smaller demand. These include Accommodation clusters in the Somerset West / Strand area, the Table View area, the Claremont / Constantia area and the Bellville / Durbanville area. Public Transport services to regional areas such as Stellenbosch and Paarl could be provided by the Provincial Government of the Western Cape (PGWC), but needs to be confirmed.

The normal shuttle transport and metered taxi services will remain, but will operate at an increased scale to meet the significantly higher demand. Tour operators will typically transport (transfer) passengers to "Event Destinations", as opposed to regular tourist destinations. The higher passenger volume may require changes to the current *modus operandi* to avoid unacceptable levels of congestion.

The Special Travel Groups will be discussed in more detail in the following section. The access and operational characteristics for all public and private services will be described per transport area in **Section 4.4**.

4.3 Special Travel Groups

4.3.1 VVIP

These guests are expected to total about 14 persons plus their entourages. The procedure to escort VVIP's through the airport is well established and is done in conjunction with the South African Police Services' VIP service. VVIP passengers are escorted from their planes to the State Protocol Lounge (SPL) where they are collected in security swept vehicles.

4.3.2 FIFA and LOC VIP & STAFF

The FIFA and LOC VIP's are also referred to as Commercially Important Persons, or CIP's, and comprise about 1 100 persons. An event specific VIP processing area will be developed within the existing international terminal so that these guests will not have to move through the terminal building with the general public.

Once checked through, the VIP's will move to their transport in the Inner Lane 1 (as shown in Figure 3). The vehicle routes to and from Inner lane 1 is discussed under **Section 4.4**. While Inner Lane 1 will also be used by regular travellers, the overlap of activities between the groups could be minimised.

The general FIFA & LOC STAFF, that do not enjoy VIP status, will move through the terminal with the general public, but will make their way to the allocated Inner Lane area to board their allocated transport services.

4.3.3 MATCH Tour package holders

The "MATCH-ville" concept will see package holders reside in one location somewhere in the country throughout the event. Package holders will be eligible to watch a number of matches in different stadiums across the country. They will leave their hotel on the day of the match, fly to the relevant Host City (when not the one they reside in), be driven to the stadium for hospitality before and after the game, after which they will be returned to the airport and their base hotels on the same day.

MATCH is in the process of appointing a Transport Service Provider in each Host City to transport package holders between hotels and the relevant airport and / or stadium as required. The size of MATCH contingents, number of vehicles required and method of operation will be finalised in ongoing discussions between MATCH, their Service Provider, ACSA and the City of Cape Town's 2010 WC team.

The following assumptions are currently made to assess the impact of this group on the transport operations at the airport.

- A MATCH contingent based in Cape Town would possibly move through the airport on every day that a match is played elsewhere in the country;
- Up to two MATCH contingents could move through the airport on a day that a match is played in Cape Town and elsewhere in the country;

- Each MATCH contingent will pass through the airport twice on a particular day;
- Departures from the CTIA will take place out of the inner lanes;
- Groups flying out of Cape Town will be dropped on the upper level drop-off lane;
- Groups will be accompanied by a tour guide during the entire trip;
- Groups will travel predominantly with only hand luggage;
- The Transport Service Provider is a firm with ample experience in the transport of groups to and from the airport;
- It is likely that these contingents will operate as “independent travellers”, which will have a smaller impact on the operations at the airport than “dependent” travellers.

It is anticipated that the movement of the MATCH contingent through the terminal building and onto the vehicles will be efficient and smooth, given their professional guidance and the fact that repetition would foster some familiarity among these passengers.

A possibility exists that the MATCH transport provider could operate from the Plaza, between the IRT and Metered Taxi lanes, to improve the efficiency of its service and, more importantly for the Host City, free up capacity in the inner lanes. This option requires further investigation and discussions between the various role players. In this eventuality the vehicle flow would be similar to that of the Metered Taxis.

4.3.4 Hospitality Groups

A distinction is made between sponsor and corporate hospitality guests based on the corporation’s affiliation with the event. For the purpose of this plan, however, no distinction is made in the manner these guests move through the airport. Hospitality guests would arrive at the airport independently, but will then need to meet a host that will guide them to pre-arranged vehicles for their onward journey.

The Transport Service Centre (TSC), which is currently being developed by ACSA, will contain information desks where guests can meet their hosts or obtain information on the location of their buses. All transport services provided to these groups will be through the Inner lanes. Transport for Hospitality groups will be provided by the LOC through the vehicle fleets acquired for this purpose, and could further be supplemented by the MATCH transport provider.

Also included in this group would be general tourist groups visiting Cape Town who are not associated with the event. These groups will be met by regular transport service providers in the Meet & Greet areas, as usual, or through the TSC from where they will be escorted to their vehicle. All services provided for these groups would move through the Inner lanes. It is assumed that, given the prominence of the event, the vast majority of tourist groups will, in fact, be associated with the event.

4.3.5 Media

It is likely that FIFA accredited media representatives will be provided with a dedicated shuttle service from the Airport, though this has not yet been confirmed. This service would operate from one of the Inner lanes and will only be accessible with an accredited media access card.

4.4 Facilities

The transport areas within the VTOP precinct are shown in **Figure 3**. The existing and proposed event access and operational procedures of each area is described in the following sections.

4.4.1 State Protocol Lounge

The State Protocol Lounge (SPL) is situated to the north of the terminal building and has a direct access from both the land and airside. The routes along which these vehicles move are defined as Protocol Routes and are under constant camera surveillance. The primary access route to the State Protocol Lounge from the Airport Approach Road is shown in **Figure 6**.

4.4.2 Inner lanes

The layout of Inner lane 1, situated between Parkade 1 and the current international terminal, is shown in **Figure 7**. The layout of Inner lane 3, situated on Central Boulevard in front of Parkade 2, is shown in **Figure 8**. Coaches and shuttle buses collecting pre-arranged charter bookings will be eligible to receive access permits to enter their preferential pick-up areas. The circulation routes to and from the Inner lanes are shown in **Figure 9**.

At present drivers of such vehicles are issued with an access card that provides access through the boomed entrance of the Inner lane. It will be necessary to extend the access cards to additional operators for the duration of the event. It may be necessary to issue temporary access permits during the event as fleet utilisation changes, which would require that ACSA extend the function of issuing permits for the Event.

The additional operators and volume of passengers will dramatically increase the demand on space currently occupied by coaches and shuttle buses. The potential problem with the current operations is discussed and an alternative is suggested.

(a) Current Operation

Tour operators arrive in the Bus Holding Area (BHA) at random. When their relevant plane lands, the driver moves the coach or shuttle to the Inner lane (for which an access permit is already required). Once parked, for shuttle buses the driver, and for coaches an assistant, moves into the arrivals hall to “meet & greet” passengers. When all or most passengers are gathered, they are taken to the vehicle. The coach assistant will return to the arrivals hall to collect any outstanding passengers. Vehicles could wait from 30 to 90 minutes should some passengers be delayed, e.g. at customs or due to luggage.

The layout of Inner Lane 1 provides for 16 coach bays and 23 shuttle bays. **Table 4.1** shows the impact of dwell time on the capacity of the space. For the sake of calculation coaches are assumed to carry an average of 35 passengers (pax) and shuttle buses 12.

Under current conditions the capacity of the Inner lane 1 could be as high as 1 672 pax/hr or as low as 560 pax/hr. Given the level of activity and disruption expected during the event, the longer dwell time scenario is much more likely, which means that the operational capacity of the Inner lane would be small.

Intervention is required to plan the operations in the Inner lane so that dwell time for vehicles is minimised, thereby increasing the operational capacity.

Table 4.1: Impact of dwell time on Inner Lane 1 capacity

	Dwell time	Veh/bay/hr	Bays	Pax/veh	Pax/hr
Coach	30min	2	16	35	1 120
Shuttle	30min	2	23	12	552
Total					1 672
Coach	60min	1	16	35	560
Shuttle	60min	1	23	12	276
Total					836
Coach	90min	0.67	16	35	375
Shuttle	90min	0.67	23	12	185
Total					560

(b) Proposed Operation

Table 3.3 shows that the peak demand for coach and shuttles is an estimated 1 700 pax/h. The indication from the tour transport industry (SATSA and TOACT) is that a dwell time of 60 minutes for coaches and 30 minutes for shuttles is realistic, given adequate intervention. **Table 4.2** shows the maximum dwell time that is allowed to accommodate the design flow of 1 700 pax/h through the 21 coach and 32 shuttle bays available in the inner lanes. The additional 5 coach and 9 shuttle bays shown in **Table 4.2** will be provided for the Event in Inner Lane 3.

Table 4.2: Design capacity of Inner lanes

	Bays	Pax/veh	Dwell time	Veh/bay/hr	Pax/hr
Coach	21	35	53 min	1.13	832
Shuttle	32	12	26 min	2.31	886
Total					1 718

Dwell time for both vehicles and passengers are minimised when vehicles and passengers arrive in the Inner lane simultaneously. However, for convenience sake, vehicles should arrive marginally before the first passengers. When passengers arrive as a group, the boarding time is also minimised, thereby minimising the dwell time of a vehicle.

The intervention required to facilitate this coordinated arrival process will be in the form of a Transport Operations Manager that will receive information on both vehicle and passenger group arrivals, and who will coordinate the relative departures from the Bus Holding Area and Transport Service Centre inside the terminal building. The coordination is described in **Section 4.13**.

Goods delivery for the “airside shops” will be delivered through the area directly to the south of the Inner Lane 1. While goods delivery vehicles will share the access road of the Inner Lane 1 with coaches and shuttles, off-loading will take place in the enclosed area, away from passenger movements. However, to reduce the level of conflict in Inner Lane 1, deliveries will not be allowed during the peak periods during the Event. To ensure adequate stock levels, additional storage space is being prepared within the terminal building and agreements

Inner lane 2 will be used for the delivery of goods to the “landside shops” in the terminal building. No passenger movements will take place in this area to minimise the conflicts between commercial and passenger operations.

4.4.3 Public Transport Plaza

Figure 10 shows the layout of the new Plaza from where the Integrated Rapid Transport system (IRT), Metered Taxis and possibly the MATCH transport provider would operate from. The current layout has capacity for two IRT buses, two other buses and 16 metered taxis.

The IRT service refers to the trunk service between the airport and the Main Transport Hub (MTH) in Hertzog Boulevard, central Cape Town. Vehicles will travel on this route according to a pre-determined frequency and depart according to a schedule. Buses will arrive directly into the IRT station where boarding of new passengers will follow the alighting of those leaving Cape Town. The circulation of IRT buses through the Transport Plaza is shown in **Figure 11**.

All these services would operate on a schedule that will be fixed for different levels of demand. IRT buses will have capacity of 40 passengers and could operate at up to 30 second headways through the two bays of the IRT station, depending on the vehicle mix. Since the full IRT fleet will not be available, the service will operate at a nominal capacity during the Event. The operating capacity can be adjusted throughout the event depending on variations in demand.

Metered taxis will operate as at present through a system of releasing a vehicle from the Holding Area for each taxi that leaves with passengers. It is anticipated that the demand for metered taxis at the airport will be significantly higher than under prevailing conditions. For this reason, the space in the Plaza area will allow for an uninterrupted flow of vehicles on a FIFO (first-in-first-out) basis.

Touchdown Taxis, the only licensed operator at the airport, currently operates with a fleet of 34 vehicles. Negotiations are currently underway to increase this to between 40 and 50 vehicles. However, while it is difficult to estimate, it is anticipated that more than 100 additional vehicles could be required to ensure effective service delivery during the peak of the event.

A system, that will allow the size of the existing taxi fleet to be flexible during the event, is being developed with the industry and other role players. It is presumed that the demand for Metered Taxi services will shift in time and space throughout the metropolitan area. It could therefore be efficient if a contingent, if not all, of the approximately 700 metered taxis in Cape Town obtain temporary licenses to operate across the entire Metropolitan area for the duration of the event.

Discussions in this regard are still in early stages and will be developed over the coming months. The circulation of Metered taxis to the Holding Area via the drop-off lane and into the Plaza is shown in **Figure 12**.

4.4.4 Holding Areas

The layout of the redesigned Vehicle Holding Area (VHA) is shown in **Figure 13**. It will have capacity to hold at least 11 coaches, 13 shuttle buses and 18 metered taxis. It is envisaged that the capacity will be adequate under normal operations during the event, but that it could fill up in anticipation of a peak in passenger arrivals. In such an eventuality vehicles will be diverted to the Overflow Holding Area (see **Figure 3**).

The layout design of the overflow holding area is pending, but the area is large enough to accommodate the likely maximum demand. The area will also be used by a wide range of security and emergency services. The circulation of buses and coaches through the Overflow Holding Area is shown in **Figure 14**. Vehicles can access the area off Borchard’s Quarry Road via Michigan Road to avoid having to travel through the precinct on Central Boulevard. The circulation of emergency services vehicles is shown in **Figure 15**.

4.4.5 Rental Cars

The rental car area will be moved to the centre of the current shaded parking, between the future shaded parking areas, as shown on **Figure 3**. Collected and returned vehicles will access the area from Central Boulevard, while a service road onto Tower Road will be used to stock or clear vehicles from the client access area. Pedestrians moving to the Rental car spaces will cross the Central Boulevard via subways situated on either side of the Transport Plaza.

4.4.6 Central Terminal Building

A new Central Terminal Building will result in both domestic and international travellers moving through the same general arrivals and departure hall.

It is proposed that arriving passengers be segregated before entering the general “Meet & Greet” area. Passengers with pre-arranged transport should be separated from those using private or rental cars and general public transport services. To prevent the typical bundling around the “Meet & Greet” areas, ACSA is preparing a Transport Service Centre where hosts can meet their guests and where groups can obtain detail of their transport services.

Public transport users would be guided to information desks where visitors will be assisted in finding their chosen mode of transport. These passengers will also be guided by signage to different transport modes, so that those using public transport, rental cars and metered taxis are separated while moving through the arrivals hall.

The result would be a much reduced average waiting time for coaches and shuttle buses in the Inner lanes, which would result in a much lower demand of bays and space. Detail of the terminal building is currently being designed and will be included in future updates of this VTOP document.

4.4.7 Drop-off lane (upper level)

Drop-off for all vehicle types, except IRT and possible other scheduled services, will occur on the upper level drop-off area in front of the check-in area for departures. The layout of the drop-off lane, shown in **Figure 16**, will allow multi-lane drop-off with a separate area for coaches and buses as well as separate bays dedicated for disabled passengers. There will be two free-flowing through lanes for departing traffic to exit from the area freely.

It is critical to ensure that drivers of vehicles who drop-off passengers do not leave their vehicles unattended, but clear the area as soon as possible. ACSA’s traffic wardens will assist in moving vehicles along, but the City’s traffic police is required to remove illegally parked vehicles in order to reduce the risk of congestion.

The route through the drop-off area is shown in **Figure 17**, where it is also indicated how metered taxis and other public transport vehicles would move back to the Holding Area to await access to pick-up embayments in the plaza or inner lanes.

The scheduling and flow of passengers and vehicles from the CBD to the airport after a match will be critical for the successful operation of boarding and departure of planes. This aspect will be addressed in the run-up to the next release of this VTOP.

4.4.8 Capacities of Transport Facilities

Table 4.3 shows a summary of the number of bays in each of the transport facilities, including an estimate of vehicle capacities given realistic average dwell times.

Table 4.3: Capacity of Landside Facilities

Facility	Type	Bays	Dwell time	Capacity /h
Inner Lane 1	Coach	16	60	16
	Shuttle	23	30	46
Inner Lane 3	Coach	5	60	5
	Shuttle	9	30	18
Parkade 1	Car Parking	4050		
Parkade 2	Car Parking	1748		
Shade Parking 1	Car Parking	780		
Shade Parking 2	Car Parking	955		
Transport Plaza	Metered Taxi	16		
	IRT	2		
Car Rentals	Car Parking	1500		
Staff Parking	Car Parking	1500		
Disabled bays	Disabled Bays			
Drop-off lane	Cars	60	10	360
	Coach	4	20	12
	Shuttle	4	10	24
	Disabled Bays	3		
Vehicle Holding Area	Coach	20		
	Shuttle	17		
	Metered Taxi	21		
Overflow Holding Area	Coach			
	Shuttle			
	Metered Taxi			

4.5 Traffic Circulation Plan

Major changes are being made to the internal road network at the airport to serve the needs of the new terminal and parking facilities. Changes to the current road layout include:

- Realignment of the exit section of the Ring Road, with a free flow onto Airport Approach Road;
- Replacement of the current traffic signals at Airport Approach and Tower Roads with a traffic circle;
- Relocation of a section of the entry section of the Ring Road to the end of Parkade 1. Here the road will split to the upper level drop-off lane behind Parkade 1, enter into Parkade 1 and continue along Central Boulevard. Central Boulevard will give access to the Shade Parking areas 1 & 2, the rental car area, the Transport Plaza, as well as Parkade 2.
- There will no longer be a dedicated passenger pick-up area and pick-up will occur inside the public parking areas.

The traffic circulation routes to all areas within the airport precinct are shown in **Section 4.4**.

4.6 Pedestrian Circulation Plan

The Cape Town International Airport will have a new Central Terminal Building (CTB) where both domestic and international passengers will be processed. Entrance to the CTB will be via two main entrance doors on the Plaza for people arriving on ground level, and doors opening into the departures hall for people dropped-off on the upper level. The general public, whether in groups or independently, will only be able to exit the CTB onto the Plaza. Additional access will be provided for VIP passengers via the current entrance to the International terminal building to Inner lane 1.

With Inner lane 1 and Parkade 1 being to the north of the Plaza, the majority pedestrian movement will be through the northern access door of the CTB. Signage inside the CTB should therefore guide persons moving to the IRT station, Metered Taxis and Car Rental areas through the southern door (left when exiting the CTB) to ensure a more balanced flow of pedestrians. The desired pedestrian flows out of the CTB are shown in **Figure 18**.

Circulation into the shaded parking and car rental areas will be via underpasses on both sides of the Transport Plaza / IRT station. Pedestrian movement into the open parking area will be improved through urban designs to include covered walkways and passenger waiting areas. **Figure 19** shows an artistic impression of the covered walkways.

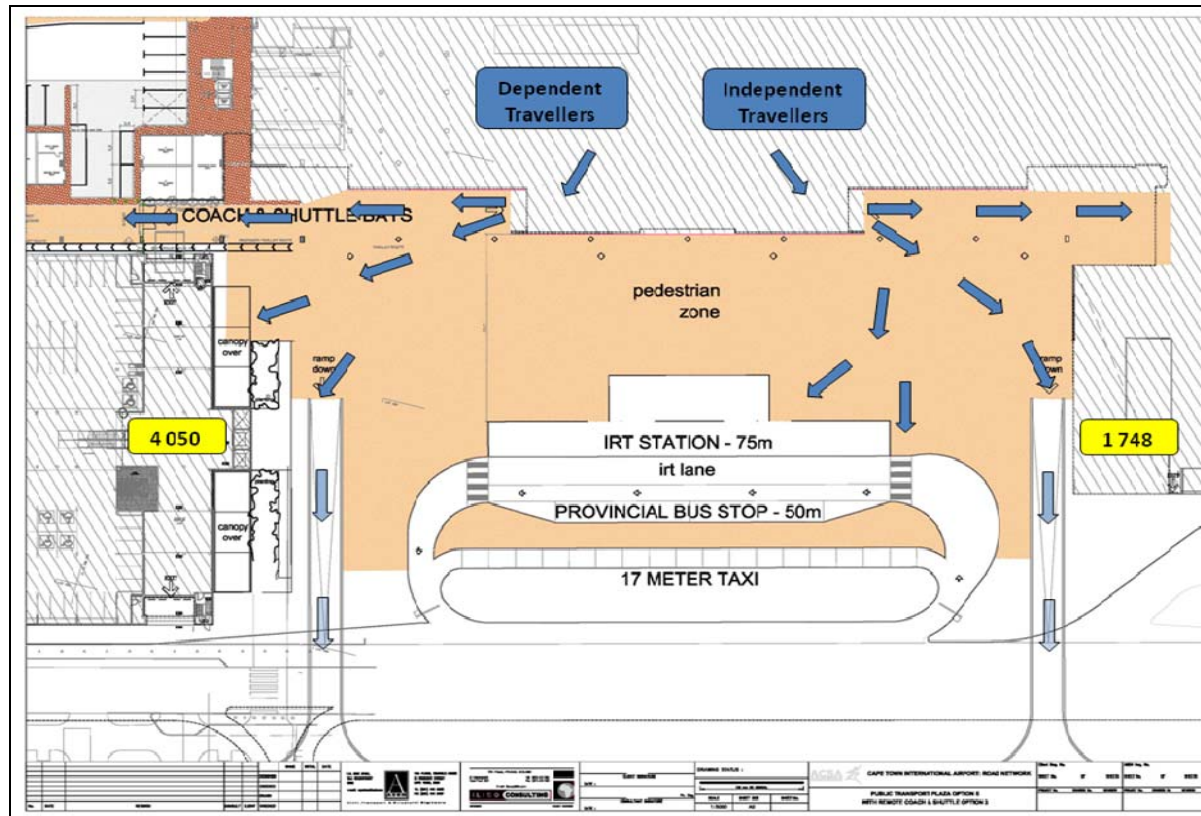


Figure 18: Desired Pedestrian Routes

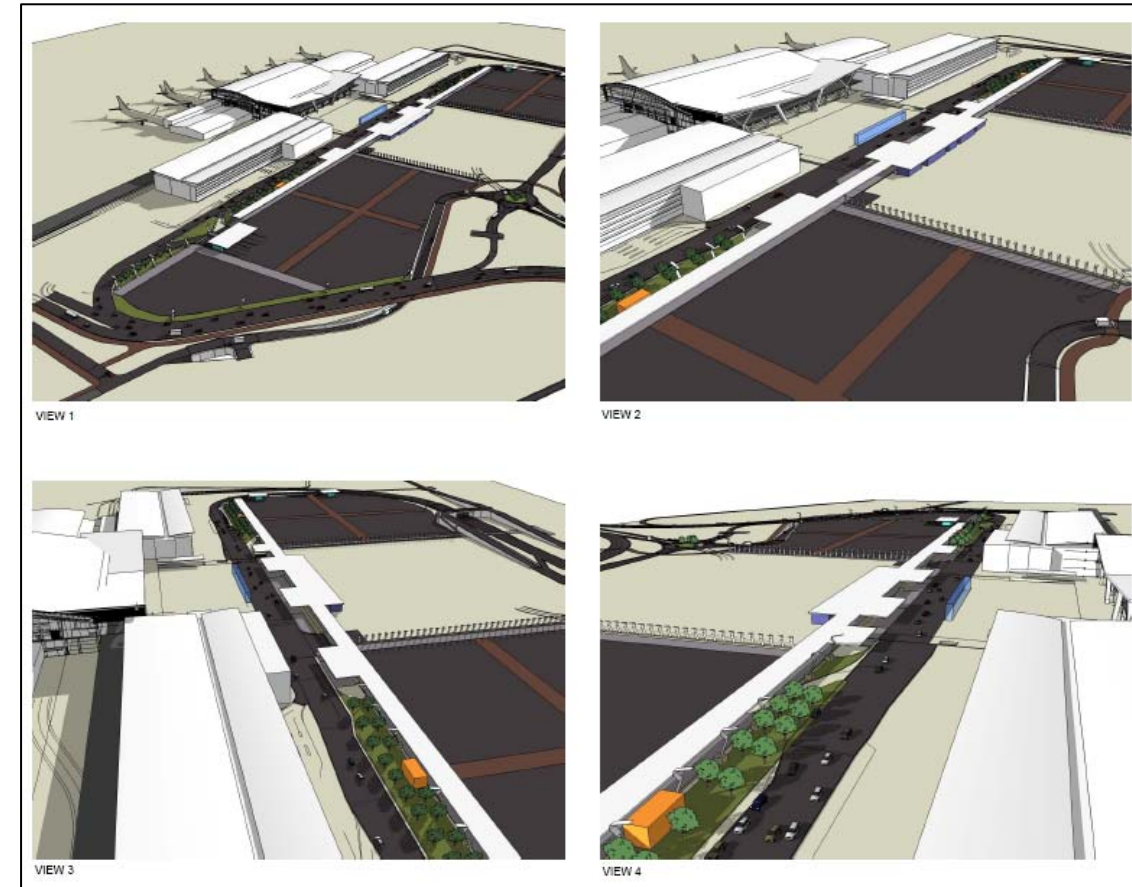


Figure 19: Covered Pedestrian Walkways

4.7 Safety and Security Circulation Plan

Normal security arrangements at the CTIA are already of a high standard to conform to international aviation regulations. The event security plans will include the deployment of additional security staff to address the requirements of the increased passenger volumes. These plans are collated into this document with specific reference to the issues impacting on the transport operations during the event.

4.7.1 Safety & Security Arrangements

Teams moving through the terminal building would pose a major safety and security risk at the airport as large numbers of fans could gather. To avoid the risks of overcrowding, it has been agreed by the Cape Town stakeholders that no teams would move through the terminal building at any time during the event. This view is supported and recommended by ACSA at all its airports across the country.

ACSA acknowledges that fans will arrive in numbers regardless, but that a plan is being developed to deal with possible unruly fans. The arrival of groups of fans in public transport services could be managed through a reduced supply of services at such times. Appropriate public relations programs should be developed to inform and discourage fans from expecting to see teams. This plan will be finalised by ACSA and scrutinised by other role players.

Buses collecting teams can be swept on airside to minimize escort of empty vehicles over long distances. Buses and shuttles for VIP's will be swept in the Overflow Holding Area where

emergency services will also hold. From here Police escorts will accompany vehicles to their bays in Inner lane 1.

VIP services of the SAPS will determine alternative routes for VVIP access to and from the State Protocol Lounge. These arrangements would not be disclosed in the VTOP document.

4.7.2 Traffic Management

Traffic Officers will be deployed throughout the airport precinct for the duration of the event. ACSA will provide an initial plan for the location and number of persons required. Metro traffic will respond to this plan in conjunction with other role players. Provincial traffic officers are involved in detailed planning that requires their response i.t.o. management of traffic on the Protocol Routes to and from the airport.

4.8 Freight & General Aviation

All air freight moves through the freight buildings to the north of the terminal buildings, shown in **Figure 20**. Freight vehicles can approach the Airfreight buildings via Airport Approach Road or Modderdam Road.

Figure 20 also shows the access route to the General Aviation area. Access is via the Ring Road, but dedicated access is available off Borchard's Quarry Road via Michigan Road. Signage would be enhanced to encourage the direct route, in order to prevent unnecessary through traffic on Central Boulevard or the Drop-off Road.

4.9 Parking Plan

The locations of parking facilities for private cars are shown in **Figure 3**. **Figure 21** shows a perspective of Parkade 1, which is currently under construction. Both multi-storey areas (Parkades) and shaded parking facilities will be operational at the time of the event, providing a total of 7 533 bays. These include bays for disabled persons in the multi-storey parking facilities. In addition to this, 1 500 parking bays are provided for staff parking, while the Car Rental companies have use of a further 1 500 bays. The number of parking bays in each area is summarised.

- Parkade 1: 4 050 bays
- Parkade 2: 1 748 bays
- Shade parking 1: 780 bays
- Shade parking 2: 955 bays
- Staff parking: 1 500 bays
- Car Rental: 1 500 bays



Figure 21: Parkade 1

The circulation routes and access points into the different public parking areas are shown in **Figure 22**.

4.10 Signage Plan

Because it will be the intensity and not the mechanism of operation that will change at the airport for the event, there is little need for temporary road or pedestrian signage. The event signage plan will be completed in relation to the permanent signage designs.

Figure 23 shows the proposed location of event specific signage. All event-related signage will be permanently erected for the duration of the event so that there will be no daily variations that will require the manual shifting of signs.

4.11 Emergency Vehicle Circulation Plan

It will be necessary to have a fleet of emergency and security vehicles on stand-by at the airport for the duration of the event. The Emergency services will include:

- Ambulance services;
- Fire fighting services;
- Tow-away services;
- Bomb diffusing team;

The emergency services will be located in the Overflow Holding Area, together with buses, shuttles and metered taxis. Circulation routes for this area are shown in **Figures 14 & 15**. Incidents are dealt with under normal or near normal operations, for which emergency services use normal access routes to reach and deal with incidents.

Disasters will require the entry lane to the airport to be blocked off to prevent additional vehicles from entering the precinct. The access road can be blocked off at either the Borchard's Quarry Interchange or at the Airport Approach Road Interchange with the N2. Such an eventuality will involve cooperation between Provincial and Metro traffic departments.

Vehicle departures out of the precinct will be managed by controlled opening of the boom gates of the Parkades and Shaded parking areas.

Rendezvous points for evacuation of terminal building and Parkades are being finalised by ACSA.

4.12 Site Management Plan

This section describes the proposed operational management of the landside operation at the airport during the event. Details of this system are being established in discussions between ACSA, the Host City and the local tourist transport provider organisations.

A new Airport Management Centre (AMC) will be located inside the new Central Terminal Building (CTB). Representatives from all transport management as well as safety, security and emergency services will be represented here. CCTV footage that covers the total airport precinct (landside, airside and inside the terminal building) will be screened in the AMC. The Transport Operations Manager (TOM) will be able to view all the transport areas discussed in **Section 4.4** and will receive information about operations on the airside and within the terminal building.

The ACSA CCTV coverage overlaps with the City's own system on the Protocol Route in the vicinity of the Borchard's Quarry interchange on the Airport Approach Road. Discussions are underway to link this information to the Transport Management Centre (TMC) in Goodwood, which will serve as the primary Operational Control Room in the City for the event.

The main objective of the TOM will be the effective operation of the landside transport system. He / she will coordinate the movement of passenger and vehicle flows to minimise dwell time for both passengers and vehicles. The TOM will use the information about the different travel groups to guide the response of the vehicle fleet in the transport system. At least two people would have to share this responsibility over the extended peak periods of operation.

During peak periods of the event, all coaches, shuttles and metered taxis will be obliged to move into the Holding Area and will only be able to move to a bay in an Inner lane or Plaza upon instruction from the TOM. This is necessary to ensure only vehicles for which passenger groups have landed occupy the Inner lanes, and to allow the operations manager to allocate bays efficiently.

4.12.1 Special Travel Groups

Guided travel groups will be identified in the planes they arrive on, even before they land. Once inside the terminal building, they will be guided to the Transport Service Centre (TSC), where information about their dedicated vehicles will be communicated. The TOM will determine the location of the bus or shuttle contracted to pick up the passengers. This vehicle will usually arrive at the airport in good time and would be directed to the Holding Area. When the TOM is satisfied that a travel group is ready to move to the Inner lane, the bus or shuttle will be directed to move to a dedicated bay in an Inner lane.

The TOM therefore requires accurate information from the TSC, the Inner lanes and the BHA to effectively guide the flow of passengers and vehicles. Facility managers with volunteers will be deployed to both provide information to the TOM and to direct passengers and vehicles on the TOM's instruction.

4.12.2 Public Transport

The TOM will also oversee the movement of IRT buses and metered taxis. While the flow of these vehicles will be managed by the operators, the TOM will intervene when delays in either passenger or vehicle flows would result in disruption of the broader transport system.

4.13 Human Resource Plan

Additional human resources would be deployed based on the distribution of person flows, which will see high passenger flows between about 04:00 and 24:00, while tapering down during the night. It is anticipated that the following types of personnel will need to be present, or present in higher numbers, to accommodate the increased level of operations during the Event.

A **Venue Transport Coordinator (VTC)** should be on duty for 24 hours during the event, which requires that at least three persons be appointed and trained into this position. The VTC will require the assistance of a transport facility manager, or supervisors, in each of the busy transport facilities during periods of peak operation. Facility managers are required in the TSC, Inner lane 1 and Vehicle Holding Area for up to 20 hours in a day. This means that at least three persons be appointed per main facility and an additional 3 to roam through other facilities or be on stand-by. A total of twelve facility managers would therefore be required.

ACSA will ensure that the airport will operate at its design capacity by ensuring all its service providers deploy additional staff during the event. Services include airline, ground handling, security, customs and luggage handlers.

Metro Police: A number of permanent Metro Police officers are required to be stationed at the airport in the run-up and for the duration of the event. Typical problems include illegally parked vehicles, abandoned vehicles in drop-off only zones and illegal metered taxi operations. Many traffic offences currently go undetected or are not acted upon since there are no officers on site or because, by the time ACSA has reported an illegal activity, the illegally parked vehicle moved on, leaving congestion in its wake.

It is imperative that operating procedures on the new elevated drop-off lane be enforced since illegally parked or abandoned vehicles could result in major congestion and blockages on this facility. Enforcement, like the removal of abandoned vehicles to a pound, should be introduced when the facility is first opened so that a culture of non-compliance is not created among regular users.

SAPS will improve their visibility and presence to deal with the additional demand.

Cape Town Tourism currently operates the Tourism Information Desk in the arrivals hall of the domestic terminal. This service will have to be expanded both in duration and capacity.

Volunteers will be required to assist facility managers in the channelling of passengers to their destinations within the Airport, and to the spaces allocated to board different vehicles. It is foreseen that about 3 volunteers will be required in the Inner lanes, with another 3 between the Inner lanes and the terminal building. A total of 9 volunteers would be required per shift during the peak, or 18 volunteers to cover two shifts.

The proposed structure of control at the airport, under the overall control of the Host City Transport Operations Director, who could be situated in the Goodwood TMC, is shown in **Figure 24**.

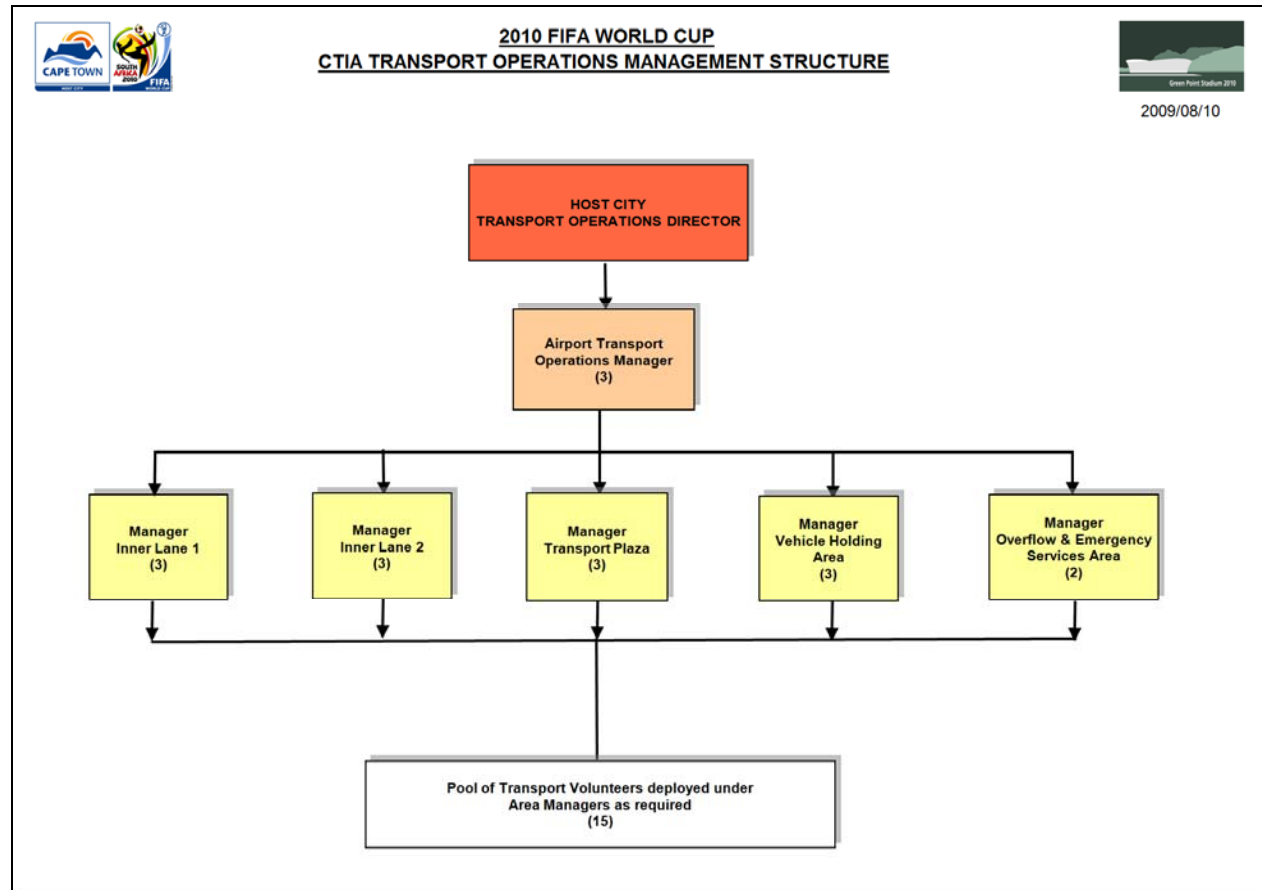


Figure 24: Management Structure for Transport Operations at CTIA

4.14 Activities and Responsibilities

The responsibility of the stakeholders at the airport will be as follows.

ACSA remains responsible for the typical day to day activities at the airport, including luggage handling and traffic marshalling.

Host City Cape Town will manage the landside transport system through the TOM in the AMC, a function linked to the overall transport management of the event.

Metro Police and **SAPS** will ensure the orderly flow of traffic as well as the safety and security of all persons moving through the airport.

5 BUDGET

The operational budget required for the event is for the deployment of additional staff and temporary signage required to facilitate the additional volume of traffic and temporary facilities. Since there will be a full time appointment of 1 TOM, only an additional 2 persons have to be budgeted for. Table 5.1 shows that an estimated R920 000 will be required to manage the transport operations at the Airport during the Event.

Table 5.1: Cost Estimation for Host City Airport Transport Operations

Item	No	Rate (R)	Unit	Quantity	Cost
Signage	1	5 000	Sign board	10	R 50 000
Transport Ops Manager	3	2 000	Day	60	R 360 000
Facility Manager	14	500	Day	60	R 420 000
Transport Volunteers	15	100	Day	60	R 90 000
Total					R 920 000

6 IMPLEMENTATION ACTIONS

The following actions are required to implement this plan or to resolve outstanding issues before implementation.

- Agreement on roles and responsibilities for implementing and delivering land transport operations at the airport during the event.
- Obtain and collate safety and security plans from all stakeholders.
- ACSA to finalise planning for the General Aviation area.
- Agreement of City's staffing requirement for the Airport Management Structure and identifying and appointing the required individuals.
- Design of the loading and scheduling of vehicles destined from the event venues to the airport after a match.
- Finalise the designs of Inner lane 3 and the Overflow Holding Area.
- Clarify MATCH transport operations planning for airport.
- Agreement on the general accreditation approach for vehicles allowed into the inner lanes.
- Agreement on the number of additional metered taxis that can operate through the Transport Plaza and the mechanism to accredit these.

Figures