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Feasibility Study

Proposed New Filling Station Entrance to Caesar's Palace along Jones Road, Jet Park Kempton Park

November 2006

Title: Feasibility Study - Proposed New Filling Station located near the entrance to Caesar's Palace along Jones Road, Jet Park – Kempton Park

Client: ECSA

Project Team: Harm Schreurs (Pr. Eng)
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Project no: Infragen 2334

Date: November 2006

Report Status: For EIA approval

FEASIBILITY STUDY AND ASSESSMENT OF IMPACT ON ADJACENT FILLING STATIONS

NEW FILLING STATION AT CAESAR'S PALACE CASINO ENTRANCE ALONG JONES STREET, KEMPTON PARK

1. INTRODUCTION

A new filling station skew opposite the Caesar's Palace casino main gate is investigated. The site will have access of Jones Street and will serve both directions of flow. It will be the only site between the OR Tambo airport, the R21 and N12 freeway. It will serve some transient traffic on Jones Street travelling between Boksburg and Kempton Park as well as the local industrial and office as well as the casino traffic. Due to the lack of filling stations east of the R21 the existing market has to fill up elsewhere.

The purpose of the report is to predict the feasibility of the proposed site (litres of fuel sold in a month) and to determine what impact will it have on surrounding nearby filling stations.

Jones Street is a major collector connecting Kempton Park with Boksburg. To the north it intersects with Pretoria Road which is a major collector into the Kempton Park CBD. To the south it intersects with Yaldwyn which is an arterial running east-to-west intersecting with roads such as the K90, which is an arterial feeding into the East Rand Mall and provides access onto the N12 freeway. Jones Street provides access to various industrial developments as well as the Caesar's Palace casino and major office developments (SAA). Access to the R21 freeway is obtained via Griffiths Road.

The airport to the east limits new developments. Most of the area has been developed. However, major new developments to the south of the site will be completed soon and land has been made available by the ACSA for new developments just south of the site. One of the latest new developments in the area is long term cheap airport parking which is generating new trips into the area. The new developments in the area will ensure a traffic growth rate of 5% for at least the next 5 years.

There are **no major road changes** planned for the area which will influence the traffic past the site significantly. The only road changes expected are minor upgrades at intersections to improve traffic flow in the area.

2. COMPETITOR SITES

All the competitor sites within a 3km radius are indicated on **Figure 1**. There are 8 sites within 3km of which six is Engen sites (Zenex also part of Engen group), a BP and a Shell. The type of access, condition of the sites and the different traffic markets the site are catering for, are discussed below.

2.1 Engen (“The Sky Deck”):

This new site has been build exclusively for vehicles exiting the OR Tambo International airport and is in a good condition. All vehicles exiting the parking area of the airport pass the site. It is a new and unique site. The proposed site will have no impact on the site. It is not possible to access the site from Jones Street. A photo of the accesses to the site is shown in **Photo 1**.

2.2 Engen, Griffiths Road:

This site serves Jet Park north. It is an old site and needs a facelift. It serves a similar area as the area surrounding the proposed site. It caters for an industrial and commercial trade with some of the major construction companies head offices located near the site. The site is accessible from both directions since it has access of a service road which has a full access with Griffiths Road. Although the site is located on the western side of the R21 it can be expected some of the proposed site’s trade is using this site at present due to the lack of a site to the east of the R21. The railway lines to the west of the site result in no Elandsfontein or Isando traffic visiting this site. A photo of the accesses to the site is shown in **Photo 2**.

2.3 Engen, Yaldwyn Road:

This site serves Jet Park south as well as Yaldwyn Road traffic. The site is relative new and is in a good condition. It caters mainly for the westbound traffic along Yaldwyn Road due to the Shell further west serving the eastbound traffic. Similar to the previous two sites this site serves an industrial and commercial area. The site has full access of Yaldwyn and Kelly Road. It will share some trade with the proposed site since Jones Street and Yaldwyn Road do intersect to the east of the site, but on the other side of the R21 freeway. This site will be affected less than the Griffiths Road site. A photo of the accesses to the site is shown in **Photo 3**.

2.4 Shell, Yaldwyn Road:

This site too serves Jet Park south as well as the Yaldwyn eastbound traffic. It too serves an industrial and commercial area. The site will be affected less since it is located further from the site. It only has a left-in-left-out access of Yaldwyn Road. A photo of the accesses to the site is shown in **Photo 4**.

2.5 BP, Barbara Road:

This site serves Elandsfontein which consists of a small residential and large industrial area. There is some commercial trade too. Its main trade is southbound traffic along Barbara Road. The site is old and in a bad condition. It is accessible from both directions since there is a full on Trek Road. Access of Barbara Road is limited to left-in-left-out wince there is a physical median. This site will not be substantially affected due to the north-south railway lines and no bridges. These railway lines split the trading market between the Jet Park sites and the Isando and Elandsfontein sites. A photo of the accesses to the site is shown in **Photo 5**.

2.6 Zenex, Kruin Street:

Similar to the BP site this is an old site serving northbound traffic along Barbara Road as well as Klopperspark, a residential area. Access to the site is a left-in-left-out from Barbara Road and full access from Kruin Street. The site will not be substantially affected by the proposed site for the same reasons as given at the BP site. A photo of the accesses to the site is shown in **Photo 6**.

2.7 Engen, Isando:

This site serves Isando. It is accessible from all directions with two full accesses. For the same reasons as for the previous two sites this site will not be affected substantially by the proposed site. A photo of the accesses to the site is shown in **Photos 7**.

2.8 Zenex, Spartan:

The last site within the 3km radius is this old Zenex filling station located within Spartan. It does not serve any transient traffic but only the local Spartan traffic. It is accessible from all directions with two full accesses. The site will not be substantially affected since it is located to the north of the R24 and west of the R21. The site is not very visible from Andre Greyvenstein Road. A photo of the accesses to the site is shown in **Photo 8**.

3. CATCHMENT AREAS AND SHARED TRAFFIC VOLUMES

Physical man made barriers such as freeways, major arterials, railway lines or natural barriers such as mountains, rivers and dams create different markets (catchment's area for a site). For this study the study area is divided into **five existing markets (spheres)**. They are:

- 1) Jet Park: Served by Sites 2, 3 & 4 (north, south and east)
- 2) Isando and Elandsfontein: Served by Sites 5, 6 & 7.
- 3) Spartan: Served by Site 8
- 4) OR Tambo airport: Served by Site 1

The proposed site will cater for Jet Park East (area east of R21). Only sites 2, 3 and 4 will be affected substantially by the proposed site. The other 5 sites will not be affected by the proposed site.

These filling stations within the 3 km radius are shown in **Figure 1**. The shared traffic volumes between the sites were determined from numerous 24-hour counts done by Infragen Consulting Engineers (Pty) Ltd as well as the road authorities in the same area in recent years. The expected shared traffic volumes are summarised in Table 1.

Table 1: Shared traffic

Filling Station	Potential Passer-by traffic	Traffic shared with new filling station	% of potential traffic shared	General comment
1. Engen	18 000vpd	100vpd	0,6%	Site caters for airport only Commuter trade.
2. Engen	20 500vpd	3 000vpd	14.6%	Site caters for Jet Park North industrial/commuter trade.
3. Engen	18 500vpd	2 000vpd	10.8%	Site caters for Jet Park South industrial/commuter trade.
4. Shell	16 000vpd	1 500vpd	9.5%	Site caters for Jet Park South industrial/commuter trade.
5. BP	25 500vpd	200vpd	0,8%	Site caters for different market
6. Zenex	27 500vpd	200vpd	0,7%	Site caters for different market
7. Engen	23,500vpd	200vpd	0,9%	Site caters for different market
8. Zenex	9 000vpd	200vpd	2,2%	Site caters for different market

4. INTERCEPTION RATES AND AVERAGE FILL

The average fill per vehicle, facilities provided at the various sites and current monthly sales were surveyed at the adjacent sites. These are shown in the table below.

TABLE 2: Facilities, Average Fill and Current Sales Survey

Brand	Site No.	C-store	Food outlet	Car wash	Other	Avg. Fill	Liters
Engen	1	Yes	None	No	ATM	29L	385klpm
Engen	2	Yes	None	No	ATM	21L	520klpm
Engen	3	Yes	Debonair Pizza	No	ATM/Post boxes	23L	575klpm
Shell	4	Yes	None	Yes	ATM	24L	386klpm
BP	5	No	None	No	Work shop/Imperial	19L	150klpm
Zenex	6	Yes	Yes	No	Workshop	20L	275klpm
Engen	7	Yes	Nando's	No	ATM	22L	320klpm
Zenex	8	No	None	No	None	21L	180klpm
Proposed site		Branded	None	Yes	ATM	24L	

The average fill is for fuel only. The average for diesel was surveyed to be 85 liters.

It is **assumed** that the proposed site will have an average fill of **24 liter** as it can be compared with sites 2, 3 & 4 regarding location and type of traffic.

The turn-in percentage (interception rate) is determined by the following factors:

- Convenience (clean new facility and easily accessible);
- Visibility (reasonable long time to decide whether to use the facility or not);
- The amount of passer-by traffic (fixed, as per traffic count);
- Type of traffic (Transient, Commuter or industrial);
- Other nearby filling stations (competitor sites 2, 3 & 4);
- Service provided to public (car wash, shop, ATM etc);
- Good accesses (proper deceleration and acceleration lanes);
- Location (homebound, last before freeway);
- Site layout (large enough to have proper site circulation)

The **interception rate** at the proposed facility is **assumed** to be as follows:

Jones Street Northbound:	1.50%
Jones Street Southbound:	3.75%

The interception rate is based on the interception rate at similar sites, the fact that it will be a new site with a well maintained forecourt and will be serving a large residential area.

5. MOVING MARKET FACTOR BETWEEN FILLING STATIONS

A new filling station has an impact on adjacent or nearby filling stations that serve the same traffic stream. Most filling stations attracts between 1% and 8% of the passing traffic stream. The remaining traffic (between 92% and 99%) must fill up somewhere else along their route, outside the critical area of influence. This area of influence, sometimes defined by a 3km radius, can be made more specific by investigating the traffic streams that are served. Little knowledge is available on how drivers make their decision at which filling station to fill up, but it is influenced by the same factors determining the turn-in percentage (interception rate) mentioned in 4 above.

The number of filling stations in an area determines the percentage impact of a new filling station on the remaining filling stations. If, for example, there is only 1 filling station in Witbank, an extra filling station close to the existing one will take away a large percentage of its customers. If however there are 20 filling stations in the area, a new filling station will take away a much smaller percentage of the market of each of the existing filling stations.

These factors will determine the moving market factor. If an existing filling station captures 3% of the passing traffic, and a new filling station upstream or downstream opens, also capturing 3 % of the passing traffic, it will not capture the same 3% of the passing traffic stream. There will be an overlapping or moving market that will use the new filling station due to one of the factors outlined above.

Limited figures are available on what percentage of traffic will move, but the following guideline is proposed:

Table 3: Moving Market Factor

Description	Moving Market Factor
New filling station much better located, good accesses, many more facilities, etc	20 – 40%
Location similar, accesses similar, same service, etc	10 - 20 %
New site has poor access , no additional facilities, located far away from the existing filling stations	0 - 10 %

In combining the different aspects described above, an assessment can be made of the impact of the proposed new filling station on the adjacent filling stations.

Table 4: Impact of the proposed site on the surrounding sites

Filling Station	Existing sales	Moving market factor	Lost in monthly sales (2007)	Filling Station (future sales 2010)
1. Engen	385 000lpm	0,6%	2 300Lpm	445 000Lpm
2. Engen	520 000lpm	14.6%	75 900Lpm	515 000Lpm
3. Engen	575 000lpm	10.8%	62 100Lpm	595 500Lpm
4. Shell	386 000lpm	9.5%	37 700Lpm	400 000Lpm
5. BP	150 000lpm	0,8%	1 200Lpm	165 000Lpm
6. Zenex	275 000lpm	0,7%	1 900Lpm	300 000Lpm
7. Engen	320 000lpm	0,9%	2 900Lpm	350 000Lpm
8. Zenex	180 000lpm	2,2%	4 000Lpm	185 000Lpm
TOTAL MONTHLY LOSS IN SALES			188 000Lpm	

The difference between the lost in sales in the above table and the potential sales calculated in chapter 6 below is sales lost at existing sites outside the 3km radius. At present this traffic use the R21 or N12 freeways and fill up at other destinations outside the study area.

6. EXPECTED FUEL SALES

The formula to calculate the expected average literage in a month used is:

$$\begin{aligned} \text{Litres per month} &= \text{Vehicles per day passing the site} \times \\ &\quad \text{Average full normal trading days in a month} \times \\ &\quad \text{Average fill per vehicle} \times \\ &\quad \text{Percentage vehicles of passer-by traffic turning into the site} \end{aligned}$$

The traffic past the site was determined by means of a 24-hour manual **traffic count** done by Infracore and is as follows:

	March 2005	January 2008 (1 st year of operation)
Jones Street Northbound:	6 159vpd	6,790
Jones Street Northbound:	7 550vpd	8,324

The detail of the survey is provided in **Appendix A**.

The definition of full normal **trading days** in a month is the number of typical weekday sales in a month. A typical weekday is a Tuesday, Wednesday or a Thursday during a week with no holidays or public holidays. If there was no variation in the traffic there would have been 30.5 (365/12) full normal trading days in a month. If for example the weekend traffic demand is lower than during the week, the full normal trading days in a month become less.

The survey was done on a normal weekday. Due to end of the month traffic, lower weekend and holiday traffic to be generated by the industrial and office developments, it is recommended that **27** full trading days are used. Traffic to the casino will ensure some weekend and holiday traffic.

The assumed **average fills** and **capture rate** at the proposed new site has already been discussed in 4 above.

Table 5: Expected fuel sales in a month

	Jones Street Northbound	Jones Street Southbound
Traffic flow (vehicles per day)	6 790	8 324
Average fill (liters)	24	24
Trading days	27	27
Interception rate	1.50%	3.75%
Current Potential	65,999	202 270
Total liters (year 1 @ 80% of potential sales in year 1 (2008))		214 615 Lpm
Total liters (year 2 @ 90% of potential sales in year 2 (2009))		253 514 Lpm
Total liters (year 3 @ 100% of potential sales in year 3 (2010))		295 766 Lpm

*Experience has taught us that a new filling station takes time to mature, which means it sell better with time. It takes a filling station normally three years to sell at its full potential.

Diesel sales will be 20% of the monthly sales, i.e. 60,000 litres in year 3. The site will have a mature volume of in excess of 300,000 litres in a month. A mature volume between 320,000 and 350,000 litres is expected (some growth after 2010 too).

7. COST OF ROAD AND BULK EARTHWORKS

A cost element that has a large influence on the feasibility of a filling station is the cost of the road and bulk earthworks. A detailed costing was done of the external road network and the internal roads and parking areas. The detail is provided in the table below. The site will form part of the shopping centre which will have to construct the access.

Table 6: Costing of civil engineering works

SECTION	DESCRIPTION	ACCESS	INTERNAL ROADS & PARKING	TOTAL
A	Preliminary & General	R 50,000.00	R 80,000.00	R 130,000.00
B	Site clearance	R 20,000.00	R 40,000.00	R 60,000.00
C	Roadwork	R 150,000.00	R 300,000.00	R 450,000.00
D	Ancillary roadwork	R 80,000.00	R 220,000.00	R 300,000.00
E	Protection of services	R 50,000.00	R 10,000.00	R 60,000.00
	Sub Total	R 350,000.00	R 650,000.00	R 1,000,000.00
	5% Contingencies			R 50,000.00
	Professional fees			R 100,000.00
	TOTAL			R1,150,000.00

The above cost excludes building works, pump and tanks as well as the canopy.

8. FEASIBILITY

The following assumptions regarding the feasibility of the filling station can be made based upon the following:

- The land cost will be below average, while the building and other fixed costs will be similar than for any other new filling station.
- The cost of the civil works will be below average as shown in **Table 6**.
- Based on the expected fuel sales (**295 000lpm**, year 3 of operation), the monthly income will be adequate (**Table 5 above**) to support the investment on the potential site.
- The proposed site will mainly cater for the Jet Park East traffic.
- The impact of the site within 3km will be either insignificant, or the short term losses will be regained within 3 years.

A qualitative statement can therefore be made that the site will be feasible and will have NO major impact on the feasibility on any of the existing filling station sites in the area.

9. CONCLUSIONS

It is assumed that the proposed new site will sell **295 000** litres per month (year 3), which will make it feasible from a petrol sale viewpoint. The shop will have an estimated turn over of R300,000 in a month (R1 for each litre sold – rule of thumb)

The proposed site will take approximately **188 000** litres per month from the **8** surrounding sites within the 3km radius (**See Table 4**) in year 1, but these losses will be regained by 2010 (year 3).

The four (3) sites which will be affected mostly are sites 2, 3 and 4. The reasons for this are:

- Same trade zone
- Lack of facilities at existing sites
- Medium image/condition
- Better location of proposed site for Jet Park East and
- Better facilities available at new site and interaction with the centre complex.

The proposed site has the support from a traffic engineer viewpoint.

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SASOL
reaching new frontiers

CAESAR'S CASINO

**TRAFFIC COUNT AT THE INTERSECTION
OF: JONES ROAD / ACCESS TO CAESAR'S
CASINO, JET PARK**

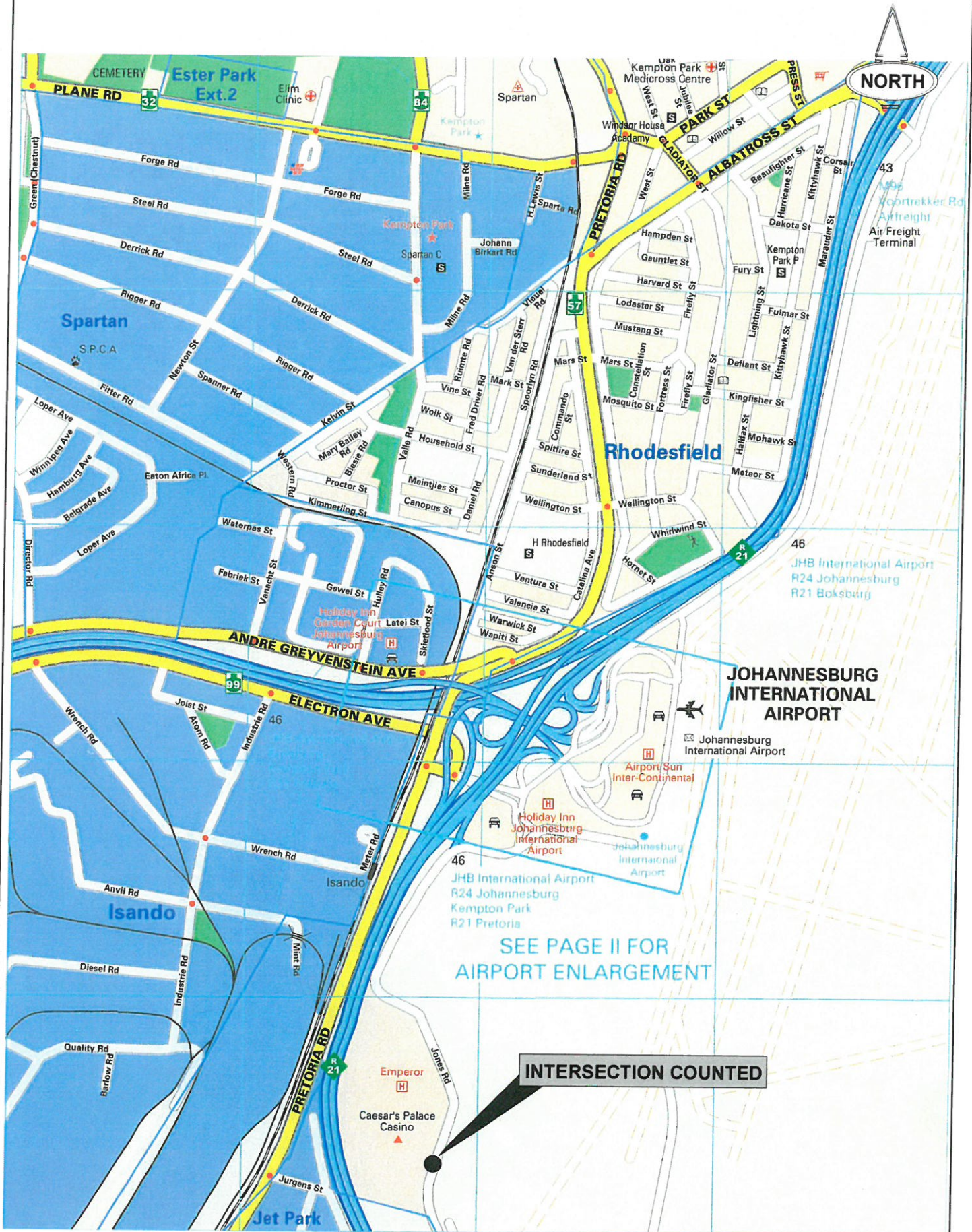
March 2005

Title: Sasol Caesar's Casino Traffic Count
Traffic count at the Intersection of Jones Road and Access to
Caesar's Casino

Project Team: Harm Schreurs Pr Eng
David Mokansi

Project no.: Infragen 1810

Date: March 2005



SEE PAGE II FOR AIRPORT ENLARGEMENT

INTERSECTION COUNTED

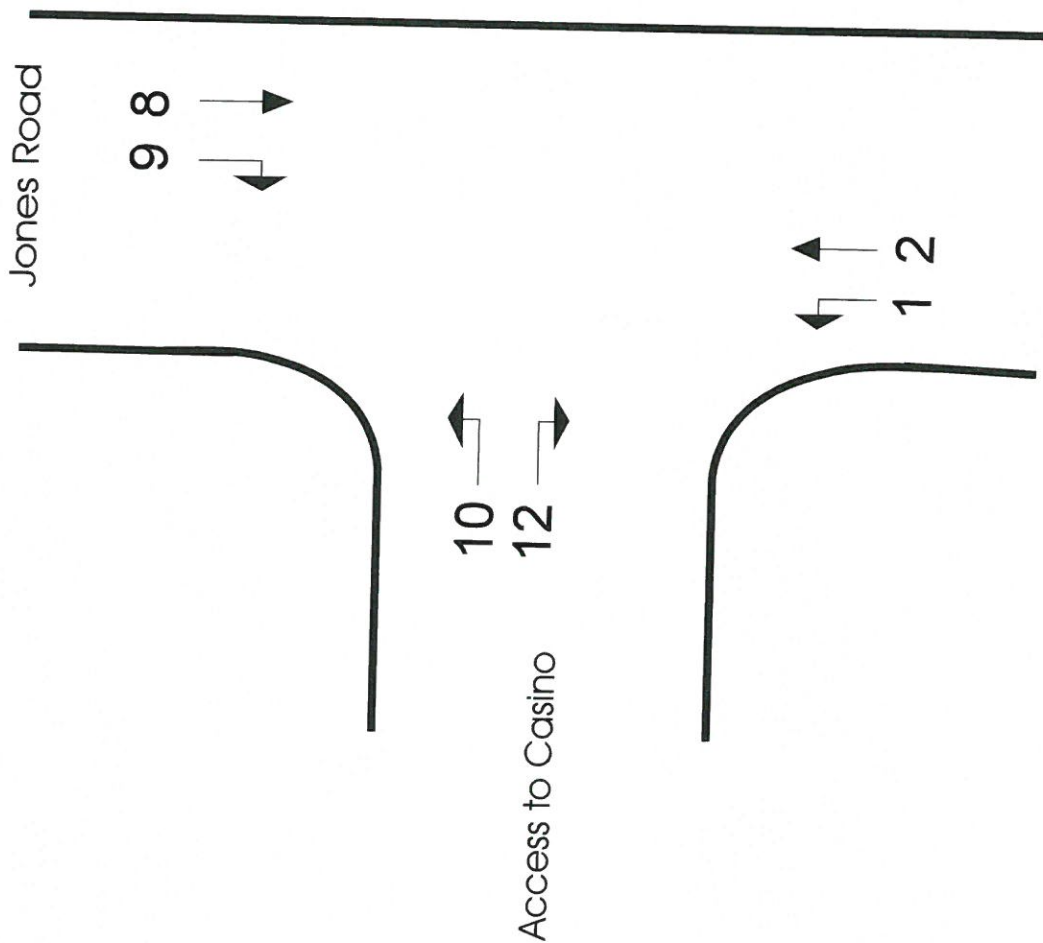
Checked by : H Schreurs Pr Eng

Project:
SASOL CAESAR'S CASINO



1810_Sasol Caesar's Casino_Locality Plan_01.cdr
 Figure: **LOCALITY PLAN**
 No. **1**

Schematic layout



Checked by : H Schreurs Pr. Eng

1810_Sasol Caesar's Casino_Traffic Movement_02.cdr



Project: SASOL CAESAR'S CASINO

Figure Description: TRAFFIC MOVEMENT

No. 2

TRAFFIC COUNT:
 INTERSECTION:
 PEAK HOUR PERIOD:
 DATE:

SASOL CAESAR'S CASINO
 JONES ROAD / ACCESS TO CAESAR'S CASINO
 13 HOUR
 THURSDAY 03 MARCH 2005

All VEHICLES

TIME		MOVEMENT NUMBER												TOTAL
BEGIN		1	2	3	4	5	6	7	8	9	10	11	12	
06:00	06:15	9	106	0	0	0	0	0	37	3	2	0	8	165
06:15	06:30	6	163	0	0	0	0	0	40	1	2	0	2	214
06:30	06:45	8	214	0	0	0	0	0	45	10	1	0	7	285
06:45	07:00	12	163	0	0	0	0	0	46	6	0	0	6	233
07:00	07:15	7	120	0	0	0	0	0	53	3	4	0	5	192
07:15	07:30	4	239	0	0	0	0	0	57	10	1	0	3	314
07:30	07:45	14	261	0	0	0	0	0	73	8	3	0	3	362
07:45	08:00	10	237	0	0	0	0	0	72	9	1	0	6	335
08:00	08:15	18	148	0	0	0	0	0	61	15	2	0	4	248
08:15	08:30	17	78	0	0	0	0	0	70	12	2	0	3	182
08:30	08:45	12	88	0	0	0	0	0	51	16	1	0	4	172
08:45	09:00	22	89	0	0	0	0	0	57	10	4	0	4	186
09:00	09:15	9	59	0	0	0	0	0	60	13	3	0	2	146
09:15	09:30	12	61	0	0	0	0	0	70	22	0	0	13	178
09:30	09:45	10	65	0	0	0	0	0	69	19	0	0	10	173
09:45	10:00	13	62	0	0	0	0	0	56	20	1	0	8	160
10:00	10:15	21	63	0	0	0	0	0	56	18	0	0	22	180
10:15	10:30	35	45	0	0	0	0	0	61	28	2	0	6	177
10:30	10:45	26	55	0	0	0	0	0	86	36	2	0	4	209
10:45	11:00	11	37	0	0	0	0	0	74	16	3	0	10	151
11:00	11:15	46	49	0	0	0	0	0	58	24	0	0	7	184
11:15	11:30	28	54	0	0	0	0	0	41	27	0	0	32	182
11:30	11:45	26	38	0	0	0	0	0	99	21	0	0	19	203
11:45	12:00	24	49	0	0	0	0	0	67	23	2	0	25	190
12:00	12:15	38	46	0	0	0	0	0	84	14	0	0	27	209
12:15	12:30	46	68	0	0	0	0	0	85	13	0	0	33	245
12:30	12:45	35	39	0	0	0	0	0	65	21	1	0	11	172
12:45	13:00	17	28	0	0	0	0	0	53	14	0	0	17	129
13:00	13:15	16	56	0	0	0	0	0	83	17	0	0	17	189
13:15	13:30	15	61	0	0	0	0	0	88	24	0	0	24	212
13:30	13:45	16	85	0	0	0	0	0	163	20	0	0	47	331
13:45	14:00	12	102	0	0	0	0	0	86	22	2	0	60	284
14:00	14:15	14	90	0	0	0	0	0	72	22	0	0	54	252
14:15	14:30	16	66	0	0	0	0	0	77	18	0	0	43	220
14:30	14:45	18	46	0	0	0	0	0	87	17	7	0	40	215
14:45	15:00	24	71	0	0	0	0	0	166	21	0	0	56	338
15:00	15:15	17	56	0	0	0	0	0	212	17	0	0	39	341
15:15	15:30	38	40	0	0	0	0	0	161	12	0	0	67	318
15:30	15:45	37	51	0	0	0	0	0	224	11	3	0	46	372
15:45	16:00	25	55	0	0	0	0	0	129	3	3	0	23	238
16:00	16:15	48	32	0	0	0	0	0	166	5	0	0	39	290
16:15	16:30	17	31	0	0	0	0	0	183	15	0	0	39	285
16:30	16:45	22	16	0	0	0	0	0	250	9	0	0	43	340
16:45	17:00	23	32	0	0	0	0	0	218	26	3	0	62	364
17:00	17:15	26	34	0	0	0	0	0	204	13	3	0	90	370
17:15	17:30	35	29	0	0	0	0	0	140	26	1	0	54	285
17:30	17:45	52	57	0	0	0	0	0	68	21	3	0	39	240
17:45	18:00	36	51	0	0	0	0	0	70	18	3	0	48	226
18:00	18:15	53	30	0	0	0	0	0	99	30	1	0	56	269
18:15	18:30	61	23	0	0	0	0	0	59	35	8	0	40	226
18:30	18:45	55	22	0	0	0	0	0	58	51	10	0	57	253
18:45	19:00	51	9	0	0	0	0	0	48	46	18	0	51	223
EST. 24 HR		1263	3869	0	0	0	0	0	4857	931	102	0	1435	12457
		1516	4643	0	0	0	0	0	5828	1117	122	0	1722	14948

TRAFFIC COUNT:
 INTERSECTION:
 PEAK HOUR PERIOD:
 DATE:

SASOL CAESAR'S CASINO
 JONES ROAD / ACCESS TO CAESAR'S CASINO
 13 HOUR
 THURSDAY 03 MARCH 2005

LIGHT

TIME		TRAFFIC MOVEMENTS												TOTAL
Start	End	1	2	3	4	5	6	7	8	9	10	11	12	
06:00	06:15	9	101	0	0	0	0	0	35	3	2	0	8	158
06:15	06:30	6	154	0	0	0	0	0	28	1	2	0	2	193
06:30	06:45	8	205	0	0	0	0	0	31	10	1	0	7	262
06:45	07:00	12	156	0	0	0	0	0	27	5	0	0	6	206
07:00	07:15	7	111	0	0	0	0	0	34	3	3	0	5	163
07:15	07:30	3	226	0	0	0	0	0	43	10	1	0	3	286
07:30	07:45	12	251	0	0	0	0	0	53	8	2	0	3	329
07:45	08:00	10	222	0	0	0	0	0	56	9	1	0	4	302
08:00	08:15	18	135	0	0	0	0	0	49	15	2	0	4	223
08:15	08:30	17	60	0	0	0	0	0	53	11	2	0	3	146
08:30	08:45	12	83	0	0	0	0	0	44	16	1	0	3	159
08:45	09:00	22	78	0	0	0	0	0	47	10	3	0	2	162
09:00	09:15	9	48	0	0	0	0	0	56	13	3	0	1	130
09:15	09:30	12	54	0	0	0	0	0	60	22	0	0	13	161
09:30	09:45	10	57	0	0	0	0	0	61	19	0	0	10	157
09:45	10:00	13	55	0	0	0	0	0	50	20	1	0	8	147
10:00	10:15	20	56	0	0	0	0	0	49	18	0	0	21	164
10:15	10:30	35	41	0	0	0	0	0	53	27	2	0	6	164
10:30	10:45	24	46	0	0	0	0	0	78	35	2	0	4	189
10:45	11:00	11	33	0	0	0	0	0	64	14	2	0	9	133
11:00	11:15	46	43	0	0	0	0	0	45	24	0	0	7	165
11:15	11:30	27	49	0	0	0	0	0	36	27	0	0	32	171
11:30	11:45	26	29	0	0	0	0	0	81	21	0	0	18	175
11:45	12:00	23	45	0	0	0	0	0	51	21	2	0	24	166
12:00	12:15	36	39	0	0	0	0	0	76	14	0	0	27	192
12:15	12:30	46	64	0	0	0	0	0	76	13	0	0	32	231
12:30	12:45	35	38	0	0	0	0	0	53	19	1	0	11	157
12:45	13:00	16	25	0	0	0	0	0	42	14	0	0	16	113
13:00	13:15	15	38	0	0	0	0	0	71	17	0	0	16	157
13:15	13:30	11	51	0	0	0	0	0	72	24	0	0	24	182
13:30	13:45	16	73	0	0	0	0	0	136	20	0	0	47	292
13:45	14:00	11	91	0	0	0	0	0	77	20	2	0	60	261
14:00	14:15	13	76	0	0	0	0	0	60	19	0	0	54	222
14:15	14:30	14	60	0	0	0	0	0	63	17	0	0	43	197
14:30	14:45	18	45	0	0	0	0	0	68	16	4	0	40	191
14:45	15:00	24	64	0	0	0	0	0	156	20	0	0	55	319
15:00	15:15	16	56	0	0	0	0	0	202	17	0	0	32	323
15:15	15:30	36	36	0	0	0	0	0	155	12	0	0	65	304
15:30	15:45	36	51	0	0	0	0	0	207	11	3	0	44	352
15:45	16:00	24	48	0	0	0	0	0	118	3	3	0	22	218
16:00	16:15	43	29	0	0	0	0	0	155	5	0	0	38	270
16:15	16:30	17	30	0	0	0	0	0	171	15	0	0	38	271
16:30	16:45	21	15	0	0	0	0	0	241	9	0	0	43	329
16:45	17:00	23	26	0	0	0	0	0	211	26	3	0	61	350
17:00	17:15	25	31	0	0	0	0	0	190	13	3	0	89	351
17:15	17:30	34	23	0	0	0	0	0	130	26	1	0	52	266
17:30	17:45	50	53	0	0	0	0	0	58	21	3	0	38	223
17:45	18:00	36	47	0	0	0	0	0	65	18	2	0	47	215
18:00	18:15	53	28	0	0	0	0	0	92	30	1	0	55	259
18:15	18:30	59	20	0	0	0	0	0	52	35	8	0	39	213
18:30	18:45	54	19	0	0	0	0	0	52	48	9	0	57	239
18:45	19:00	51	7	0	0	0	0	0	41	45	17	0	51	212
TOTAL		1225	3521	0	0	0	0	0	4274	909	92	0	1399	11420
EST. 24 HR		1470	4225	0	0	0	0	0	5129	1091	110	0	1679	13704

TRAFFIC COUNT: SASOL CAESAR'S CASINO
INTERSECTION: JONES ROAD / ACCESS TO CAESAR'S CASINO
PEAK HOUR PERIOD: 13 HOUR
DATE: THURSDAY 03 MARCH 2005

TAXI

TIME		TRAFFIC MOVEMENTS												TOTAL
Start	End	1	2	3	4	5	6	7	8	9	10	11	12	
06:00	06:15	0	5	0	0	0	0	0	2	0	0	0	0	7
06:15	06:30	0	7	0	0	0	0	0	10	0	0	0	0	17
06:30	06:45	0	7	0	0	0	0	0	13	0	0	0	0	20
06:45	07:00	0	5	0	0	0	0	0	14	1	0	0	0	20
07:00	07:15	0	6	0	0	0	0	0	14	0	1	0	0	21
07:15	07:30	0	9	0	0	0	0	0	12	0	0	0	0	21
07:30	07:45	1	8	0	0	0	0	0	17	0	0	0	0	26
07:45	08:00	0	11	0	0	0	0	0	13	0	0	0	0	24
08:00	08:15	0	7	0	0	0	0	0	10	0	0	0	0	17
08:15	08:30	0	11	0	0	0	0	0	11	0	0	0	0	22
08:30	08:45	0	1	0	0	0	0	0	6	0	0	0	0	7
08:45	09:00	0	7	0	0	0	0	0	4	0	0	0	1	12
09:00	09:15	0	9	0	0	0	0	0	2	0	0	0	0	11
09:15	09:30	0	5	0	0	0	0	0	3	0	0	0	0	8
09:30	09:45	0	5	0	0	0	0	0	3	0	0	0	0	8
09:45	10:00	0	5	0	0	0	0	0	2	0	0	0	0	7
10:00	10:15	1	3	0	0	0	0	0	1	0	0	0	0	6
10:15	10:30	0	2	0	0	0	0	0	3	1	0	0	1	6
10:30	10:45	1	6	0	0	0	0	0	2	1	0	0	0	10
10:45	11:00	0	2	0	0	0	0	0	3	2	1	0	0	8
11:00	11:15	0	4	0	0	0	0	0	3	0	0	0	0	7
11:15	11:30	1	2	0	0	0	0	0	0	0	0	0	0	3
11:30	11:45	0	6	0	0	0	0	0	5	0	0	0	0	11
11:45	12:00	0	4	0	0	0	0	0	4	2	0	0	1	11
12:00	12:15	2	5	0	0	0	0	0	4	0	0	0	0	11
12:15	12:30	0	3	0	0	0	0	0	4	0	0	0	0	7
12:30	12:45	0	1	0	0	0	0	0	5	1	0	0	0	7
12:45	13:00	1	3	0	0	0	0	0	6	0	0	0	0	10
13:00	13:15	1	16	0	0	0	0	0	5	0	0	0	0	22
13:15	13:30	4	8	0	0	0	0	0	6	0	0	0	0	18
13:30	13:45	0	5	0	0	0	0	0	8	0	0	0	0	13
13:45	14:00	1	10	0	0	0	0	0	2	2	0	0	0	15
14:00	14:15	1	11	0	0	0	0	0	2	3	0	0	0	17
14:15	14:30	2	6	0	0	0	0	0	3	1	0	0	0	12
14:30	14:45	0	1	0	0	0	0	0	7	1	1	0	0	10
14:45	15:00	0	2	0	0	0	0	0	6	1	0	0	1	10
15:00	15:15	1	0	0	0	0	0	0	4	0	0	0	2	7
15:15	15:30	2	1	0	0	0	0	0	1	0	0	0	0	4
15:30	15:45	1	0	0	0	0	0	0	8	0	0	0	1	10
15:45	16:00	1	7	0	0	0	0	0	4	0	0	0	1	13
16:00	16:15	2	1	0	0	0	0	0	7	0	0	0	1	11
16:15	16:30	0	1	0	0	0	0	0	7	0	0	0	1	9
16:30	16:45	1	0	0	0	0	0	0	5	0	0	0	0	6
16:45	17:00	0	6	0	0	0	0	0	3	0	0	0	0	9
17:00	17:15	1	2	0	0	0	0	0	9	0	0	0	1	13
17:15	17:30	1	3	0	0	0	0	0	4	0	0	0	1	9
17:30	17:45	0	3	0	0	0	0	0	5	0	0	0	0	8
17:45	18:00	0	2	0	0	0	0	0	2	0	0	0	1	5
18:00	18:15	0	2	0	0	0	0	0	5	0	0	0	1	8
18:15	18:30	1	2	0	0	0	0	0	3	0	0	0	1	7
18:30	18:45	0	3	0	0	0	0	0	2	2	1	0	0	8
18:45	19:00	0	2	0	0	0	0	0	2	1	0	0	0	5
TOTAL		27	243	0	0	0	0	0	286	19	4	0	15	594
EST. 24 HR		32	292	0	0	0	0	0	343	23	5	0	18	713

TRAFFIC COUNT: SASOL CAESAR'S CASINO
 INTERSECTION: JONES ROAD / ACCESS TO CAESAR'S CASINO
 PEAK HOUR PERIOD: 13 HOUR

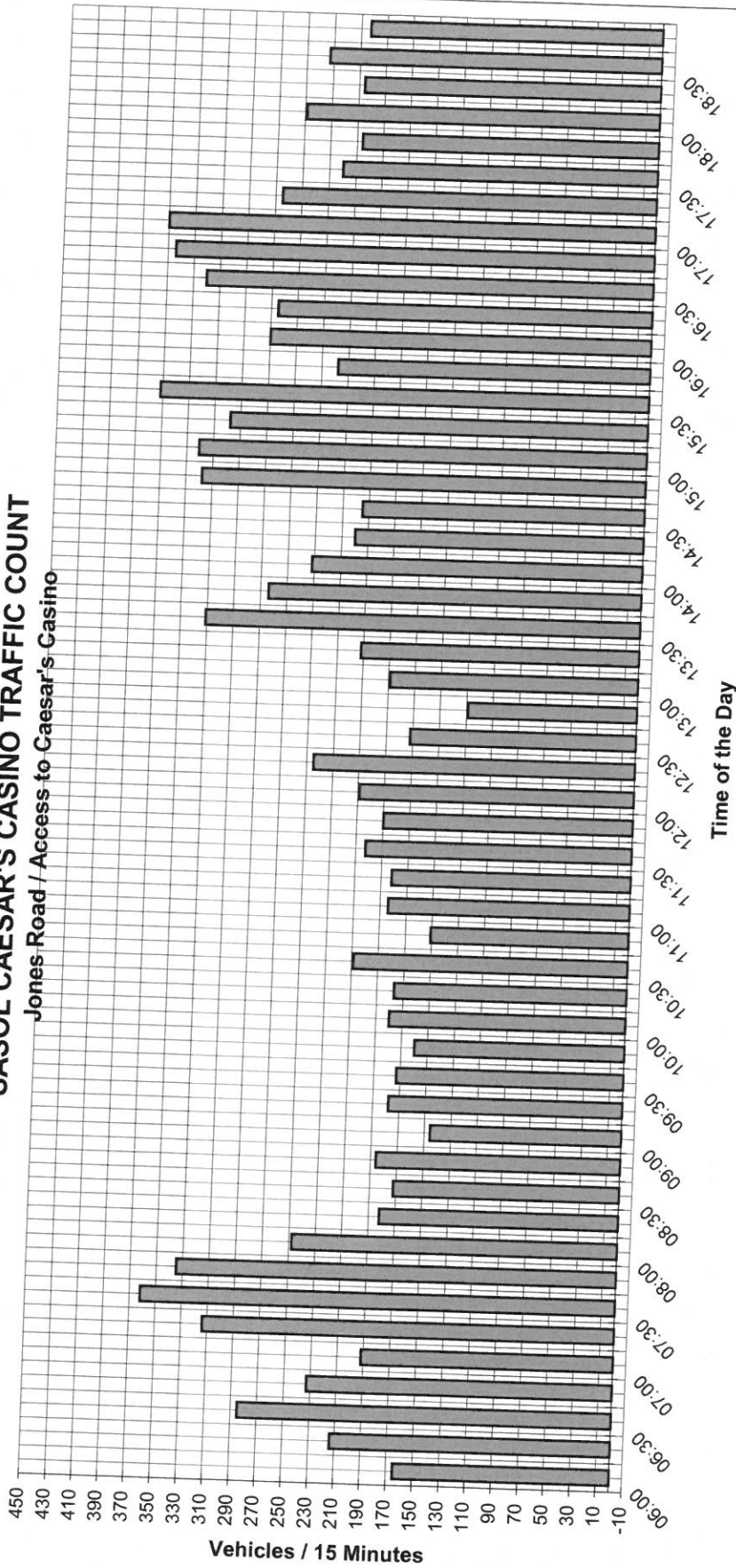
DATE: THURSDAY 03 MARCH 2005

HEAVY VEHICLES

TIME		TRAFFIC MOVEMENTS												TOTAL	
Start	End	1	2	3	4	5	6	7	8	9	10	11	12		
06:00	06:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15	06:30	0	2	0	0	0	0	0	2	0	0	0	0	0	0
06:30	06:45	0	2	0	0	0	0	0	1	0	0	0	0	0	4
06:45	07:00	0	2	0	0	0	0	0	5	0	0	0	0	0	3
07:00	07:15	0	3	0	0	0	0	0	5	0	0	0	0	0	7
07:15	07:30	1	4	0	0	0	0	0	2	0	0	0	0	0	8
07:30	07:45	1	2	0	0	0	0	0	3	0	1	0	0	0	7
07:45	08:00	0	4	0	0	0	0	0	3	0	0	0	0	2	7
08:00	08:15	0	6	0	0	0	0	0	3	0	0	0	0	2	9
08:15	08:30	0	7	0	0	0	0	0	2	0	0	0	0	0	8
08:30	08:45	0	4	0	0	0	0	0	6	1	0	0	0	0	14
08:45	09:00	0	4	0	0	0	0	0	1	0	0	0	1	0	6
09:00	09:15	0	2	0	0	0	0	0	6	0	1	0	1	0	12
09:15	09:30	0	2	0	0	0	0	0	2	0	0	0	0	1	5
09:30	09:45	0	3	0	0	0	0	0	7	0	0	0	0	0	9
09:45	10:00	0	2	0	0	0	0	0	5	0	0	0	0	0	8
10:00	10:15	0	4	0	0	0	0	0	4	0	0	0	0	0	6
10:15	10:30	0	2	0	0	0	0	0	6	0	0	0	0	0	10
10:30	10:45	1	3	0	0	0	0	0	5	0	0	0	0	0	7
10:45	11:00	0	2	0	0	0	0	0	6	0	0	0	0	0	10
11:00	11:15	0	2	0	0	0	0	0	7	0	0	0	1	0	10
11:15	11:30	0	3	0	0	0	0	0	10	0	0	0	0	0	12
11:30	11:45	0	3	0	0	0	0	0	5	0	0	0	0	0	8
11:45	12:00	1	0	0	0	0	0	0	13	0	0	0	1	0	17
12:00	12:15	0	2	0	0	0	0	0	12	0	0	0	0	0	13
12:15	12:30	0	1	0	0	0	0	0	4	0	0	0	0	0	6
12:30	12:45	0	0	0	0	0	0	0	5	0	0	0	1	0	7
12:45	13:00	0	0	0	0	0	0	0	7	1	0	0	0	0	8
13:00	13:15	0	2	0	0	0	0	0	5	0	0	0	1	0	6
13:15	13:30	0	2	0	0	0	0	0	7	0	0	0	1	0	10
13:30	13:45	0	7	0	0	0	0	0	10	0	0	0	0	0	12
13:45	14:00	0	1	0	0	0	0	0	19	0	0	0	0	0	26
14:00	14:15	0	3	0	0	0	0	0	7	0	0	0	0	0	8
14:15	14:30	0	0	0	0	0	0	0	10	0	0	0	0	0	13
14:30	14:45	0	0	0	0	0	0	0	11	0	0	0	0	0	11
14:45	15:00	0	5	0	0	0	0	0	12	0	2	0	0	0	14
15:00	15:15	0	0	0	0	0	0	0	4	0	0	0	0	0	9
15:15	15:30	0	3	0	0	0	0	0	6	0	0	0	5	0	11
15:30	15:45	0	0	0	0	0	0	0	5	0	0	0	2	0	10
15:45	16:00	0	0	0	0	0	0	0	9	0	0	0	1	0	10
16:00	16:15	3	2	0	0	0	0	0	7	0	0	0	0	0	7
16:15	16:30	0	0	0	0	0	0	0	4	0	0	0	0	0	9
16:30	16:45	0	1	0	0	0	0	0	5	0	0	0	0	0	5
16:45	17:00	0	0	0	0	0	0	0	4	0	0	0	0	0	5
17:00	17:15	0	1	0	0	0	0	0	4	0	0	0	1	0	5
17:15	17:30	0	3	0	0	0	0	0	5	0	0	0	0	0	6
17:30	17:45	2	1	0	0	0	0	0	6	0	0	0	1	0	10
17:45	18:00	0	2	0	0	0	0	0	5	0	0	0	1	0	9
18:00	18:15	0	0	0	0	0	0	0	3	0	1	0	0	0	6
18:15	18:30	1	1	0	0	0	0	0	2	0	0	0	0	0	2
18:30	18:45	1	0	0	0	0	0	0	4	0	0	0	0	0	6
18:45	19:00	0	0	0	0	0	0	0	4	1	0	0	0	0	6
TOTAL		11	105	0	0	0	0	0	5	0	1	0	0	0	6
EST. 24 HR		13	126	0	0	0	0	0	297	3	6	0	21	0	443
									356	4	7	0	25	0	532

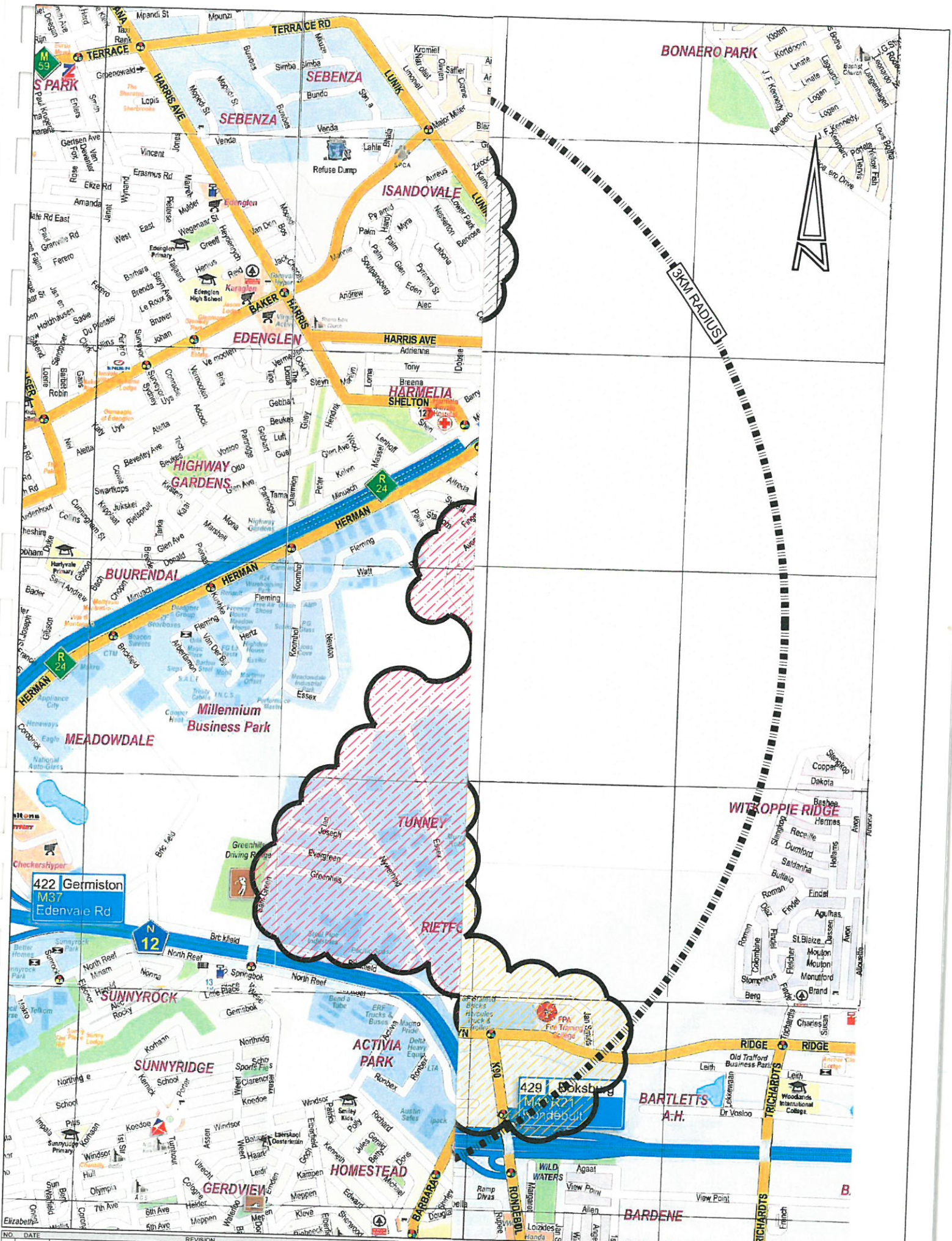
SASOL CAESAR'S CASINO TRAFFIC COUNT

Jones Road / Access to Caesar's Casino



ANNEXURE B

FIGURES



NO.	DATE	REVISION	SIGNED	CLIENT

JONES STREET FILLING STATION

COMPETITORS SITES

SCALE:	REV.

NTS

DATE: 2006/1/30

DRAWING NUMBER:

1



Engen - All vehicles exiting the parking area of the airport pass the site

Project:

EXEL JONES ROAD



Figure Description:

SURROUNDING FILLING STATIONS

2334_Photo 1.cdr

No.

1



Engen - located on the western side of the R21

Project:

EXEL JONES ROAD



Figure Description:

SURROUNDING FILLING STATIONS

2334_Photo 2.cdr

No.

2



Shell - it only has a left-in-left-out access of Yaldwayn road

Project:

EXEL JONES ROAD



Figure Description:

SURROUNDING FILLING STATIONS

2334_Photo 4.cdr

No.

4



BP - it is accessible from both directions

Project:

EXEL JONES ROAD



Figure Description:

SURROUNDING FILLING STATIONS

2334_Photo 5.cdr

No.

5



BP - it is accessible from both directions

Project:

EXEL JONES ROAD



INFRA GEN
CONSULTING ENGINEERS
(PTY) LTD

Figure Description:

SURROUNDING FILLING STATIONS

2334_Photo 5.cdr

No.

5



Zenex - site is a left-in-left-out from Barbara road and full access from Kruijn street

Project:

EXEL JONES ROAD



INFRA GEN
CONSULTING ENGINEERS
(PTY) LTD

Figure Description:

SURROUNDING FILLING STATIONS

No.

6



Engen - it is accessible from all directions with two full accesses

Project:

EXEL JONES ROAD



INFRA GEN
CONSULTING ENGINEERS
(PTY) LTD

Figure Description:

SURROUNDING FILLING STATIONS

2334_Photo 7.cdr

No.

7



Zenex - it is accessible from all directions with two full accesses

Project:

EXEL JONES ROAD



Figure Description:

SURROUNDING FILLING STATIONS

2334_Photo 8.cdr

No.

8

