# THE ASSOCIATION OF TRUST COMPANIES IN SOUTH AFRICA Conference - 1969 - Johannesburg

# DIE ASSOSIASIE VAN TRUSTMAATSKAPPYE IN SUID-AFRIKA Konferensie - 1969 - Johannesburg

### OPENING ADDRESS BY HIS WORSHIP THE MAYOR OF JOHANNESBURG, COUNCILLOR PATRICK LEWIS

OPENINGSREDE DEUR SY EDELAGBARE DIE BURGEMEESTER VAN JOHANNESBURG, RAADSLID PATRICK LEWIS

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When I was approached to open this Conference, it was suggested that I give the opening address, and I thought it might be fitting if I talked on CHANGING JOHANNESBURG - on some of the changes that are taking place today, changes which some of us in Johannesburg may be aware of, but of which we have not realised the full significance. I think for people from outside Johannesburg some of the changes may be of interest.

# AREA AND DEVELOPMENT OF MINING GROUND:

Johannesburg, until recently, covered an area of 94.48 sq. miles, but a short time ago additions were made totalling an area of 15 sq. miles. Of the 94.48 sq. miles, however, some 23 sq. miles was proclaimed mining ground, and was, therefore, not available for development purposes. The mines which originally occupied that ground are now coming to the end of their lives, and the development of this ground for other purposes is now being considered.

Johannesburg's development has been lopsided. The business area has largely been built immediately north of the proclaimed mining area. The residential development is mainly to the north and east, with limited development to the south of the mining area. Now that the mining ground is to become available for other purposes it is going to knit the centre to the south by the use of the ground, and on one mine alone, namely, part of Crown Mines, it is anticipated that it will be possible to house residentially, a population equal to that of the town of Springs, some 40,000 to 45,000 people. In addition to this, a Commission of Inquiry was appointed some time ago to consider the incorporation into Johannesburg of an area to the south. The findings of the Commission are not yet known, but the case put forward by the Johannesburg Council is that an area of some 130 sq. miles (of which Soweto is 25 sq. miles) should be incorporated. If this is done, the imbalance of the city will be rectified, and we will then have development to the south comparable to that which has taken place to the north.

#### RECREATIONAL AREA:

A short time ago quite an imaginative scheme was passed by the Council, namely, to acquire ground on what we hope will be our southern boundary, that is, the Klip River. A large portion of this ground is already owned by the City Council and, by building a wall at the eastern boundary of the ground, it is hoped to be able to create a lake covering some 200 acres, which will provide a recreational region for the people

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of Johannesburg. In addition, as was reported in the Press this week, the Minister of Planning has agreed to a scheme to reserve as a recreational area, some 18,000 morgen at a place called Suikerbosrand, which starts near Heidelberg and continues along a range of hills in a westerly direction towards Johannesburg, and it is hoped to make this an open recreational area for the population of the Reef. The length of this area is approximately 11 miles and, at places, is 5 miles wide.

100 × 1000

Various Municipalities on the Reef have had preliminary discussions, and have agreed that they will make a contribution to the capital cost and to the financing of such a scheme, to give the people of the Witwatersrand a recreational area very near to where they live. These changes are taking place, and are going to make a vast difference to the face of Johannesburg.

#### POPULATION EXPLOSION:

I would like to quote a few figures of the anticipated population explosion in Johannesburg, to give you an idea of the number of people for whom we will have to plan. In 1920 the population of Johannesburg of all races was 286,000. In 18 years it increased to half a million. In 1967 it was 1,300,000 and - by 1985 - that is in 16 years time, it is anticipated that the population will be 2,000,000. That is the human population.

#### VEHICLE POPULATION:

Now I would like to deal with the motor car population. In 1948 it was 71,000. Twelve years later, in 1960, it had doubled to 158,000. In the next 8 years there were another 100,000 cars, and by 1985 it is anticipated that there will be 400,000 vehicles on the roads. We will have more people; we will have more cars, but the street areas remain the same.

# FREEWAYS AND EXPRESSWAYS:

Johannesburg has embarked on a very large "freeways" system - portion of this is already in use and the remainder of the system should be open within the next two years. This project is to cost R64,000,000. I know unfavourable comparisons have been made between the road system of Johannesburg and that of Cape Town, and I want to congratulate Cape Town on what they have done. However, they have had to deal with a more sympathetic Provincial Council, which agreed to assist them some 4 or 5 years before the Transvaal Province agreed to assist Johannesburg. In addition, the contribution was at a higher percentage of the total cost, and in the total cost Cape Town was allowed to include the cost of the land, whereas in Johannesburg we have had to exclude in our claim for contribution any costs in connection with the acquisition of land.

When we commenced the expressway system, we were thought to be very lucky in that we could take some of the expressways over old mining ground but what a snare and a delusion that was, because a lot of this mining ground was mined in the very early days of Johannesburg. There are no diagrams now of the underground workings, and the weight of the expressways is so high that the Council has been involved in considerable expense in shoreing up the old mine workings before it was possible to build. In some cases it has been necessary to sink supports 150 feet before reaching solid ground. Another interesting fact is that into the pillars supporting the roads the engineers built "jacks" - similar to a motor-car jack, but on a very much bigger scale - so that, if subsequently there is subsidence, the pillars can be adjusted to height, and this has been a very.

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very costly part of the roadway scheme. I think I said the total cost will be something like R64,000,000, of which we are receiving a contribution from the Province and the National Transport Commission of only R21,000,000, which was calculated on the original cost of R45.5 million. When the costs were subsequently increased, we were advised that the cost to be borne by the Government authorities would have to be based on the original estimate of cost.

#### AIR TRAVEL:

Another means of travel that is changing Johannesburg is the use of light aircraft. We have an airport - the Rand Airport - and I would like to give you some figures regarding the number of take-offs and landings. Just going back to 1962, the total for that year was 28,000 takeoffs and landings. By 1965 the number had increased to 80,000, and last year, for the first time, we topped the 100,000 number of planes alighting and taking off. That compares with something like 27,000 from Jan Smuts Airport.

Jan Smuts Airport is now not just a terminal airport - it used to be the end of the run from overseas, but with the opening of the airways to Australia and to South America, Jan Smuts Airport is becoming a "through" airport. Tremendous numbers of businessmen who wish to visit Australia, come to South Africa first, and then go on. Also, people in Africa who want to get to South America will now come south instead of going north. The number of passengers carried on S.A. Airways, a great number of whom start from Jan Smuts Airport, has increased fourfold in the last ten years, and the number of passengers carried last year was close on the l million mark.

#### BUILDING:

When thinking of the changes taking place in Johannesburg, one realises that a totally different form of building is being erected great tower blocks are going up, and there is a reason for this. Until a few years ago, we had Town Planning regulations which zoned the various areas of the city into height and use zones. There was another governing factor, and that was that the height of a building could not exceed a line drawn at a 59° angle from the other side of the street, so that the width of the street was a determining factor as to how high one could build and, as a result, most of our buildings were fairly squat. However, some years ago that regulation was changed, and the 59° factor was altered. In order to get people to set their buildings back from the immediate street boundary, it was agreed that if the building was set back by 5 feet, the ground floor area sacrificed could be built at a higher level. Naturally, as more rental is paid for ground floor space in a shopping area than for space on a higher level, it is necessary to be compensated to a greater extent for the square footage lost on the ground, thus, in certain areas, if a developer sacrifices one square foot on the ground, he can, in certain areas, build 6 sq. feet on an upper floor. Developers are encouraged to set back their buildings by a minimum of 5 feet with a maximum of 10 in order to get this bonus bulk on upper floors. The more the buildings are set back from the street the higher the buildings can be built. There is also the wish to encourage developers to build residential accommodation in the centre of the city, and here again, if residential accommodation is built instead of office accommodation, in an area zoned for offices, the developer can get additional bulk bonus. This has had a fundamental effect on the type of building that is being erected today. If you examine many of the buildings under construction, you will find they are prestige blocks

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where the ground floor area contains fountains and gardens, with the result that there is more air and light around the buildings. The whole pattern is changing.

#### CARLTÓN CENTRE:

I want to deal in some detail with just one project - the Carlton Centre - to show you what is happening. On an average, between the Carlton Centre, the new Standard Bank building and the Trust Bank building, only 35% of the ground floor area will be occupied by the buildings. The remainder will be open space, so you will realise what an effect this is having on opening up our city.

Let me speak about the Carlton Centre for a few minutes. The Centre is being erected on what previously was four city blocks, the intervening streets having been closed, and the site will actually occupy six acres. This has meant a change in the services which previously went through those streets. The basements of the Centre go down a total of 95 feet. When it was decided to launch this project, the owners realised there might be claims from the surrounding owners, because owing to the excavations, the foundations of their buildings might be affected, so that, before a square yard of earth was removed from the site, the owners called in a firm of architects, and they surveyed all the buildings in the immediate vicinity. They photographed the cracks, they recorded the cracks so that they could get a factual position of the state of the buildings in the surrounding area before commencing their excavations. This was an extremely costly precaution. but they wanted to avoid claims being lodged against them for which they were not really responsible. Now, when you dig a hole of 95 ft., you draw off the water from the surrounding area, and this will affect the soil texture of that earth, because with this drainage taking place the Carlton Centre, naturally, will have to pump out the water that results from the digging of this huge hole.

On the Carlton Centre site they are building a huge office block, 50 storeys in height. Many of you know the Hertzog Tower - but the highest point of the Carlton office block will be higher than the Hertzog Tower quite staggering, isn't it? Higher than the Hertzog Tower, although it starts from a lower street level site. The Carlton Centre will have provision for the parking of 2,000 cars: the office area will be over 1,000,000 sq. feet, and it is anticipated that the employees in the office block will number between 6,000 and 7,000 persons. There is to be an observation tower on top of the office block, and it is anticipated that, as this will be a much better vantage point than the Hertzog Tower observation room, there will be half a million visitors per annum, whereas the Hertzog Tower has 300,000 visitors per year.

I have spoken of the office block. In addition, there will be the shopping centre, which will cover the whole area and be on a number of levels, and there will be a new hotel of 30 storeys in height, which will have 600 double bedrooms. It is anticipated that there will be 900 employees in this hotel, so that, with guests and employees, there could be approximately 2,000 people in that building at one time. It is impossible to predict the number of employees in the shops, or the customers there will be there at any one time during the day, but on this six-acre block there will be, at any one time. approximately 10,000 people.

This project has created immense problems for the city. Take the sewers for instance. It was never anticipated that there would be such a large congregation of people on one site, and the Council has been put to

tremendous expense in providing additional sewerage facilities. It is expected that the site will use some 500,000 gallons of water a day, and over the day it will be necessary to accept a sewer effluent of some 300,000 gallons. However, there are peak hours and valleys, and the Council has had to increase facilities so that at any one time in the peak hours, sewerage effluent at the rate of 875,000 gallons per day can be accepted. This is the type of problem we have had to provide for, which was not anticipated years ago when the mains were laid down.

The total cost of the Carlton Centre will be in the region of R67,000,000, of which R7.9 million was paid for the land. Construction costs will be something like R46,000,000: but what I know will really interest you, is the figure which I have been given for interest, which has to be paid out during the construction period, before income starts and that is a mere R3.2 million!

In addition to the shopping centre, the office block and the hotel, there is to be a very large exhibition hall, which will occupy 57,000 sq. feet. The speed of the lifts in the various blocks will be from 500 ft. to 1,400 ft. per minute. Electricity - what could the maximum demand be at any one time? This had to be calculated, for in the Electricity Department we have to cater for the peak demand. With all the offices, shops, hotel, air-conditioning plants, etc., the maximum demand for electricity, at any one time, is expected to exceed the peak demand for a city like Kimberley, and all concentrated on this six-acre block.

The problem of rubbish removal is another factor. How is it possible to dispose of all the rubbish accumulated in an office block and shopping centre and hotel of this size? The normal method of rubbish removal is by bin, but how many bins would be required to take off the rubbish from the Carlton Centre, and they would take up valuable space. The Centre will have to install a machine to enable them to compact rubbish. They anticipate that this machine can compact 80 sq. yds. of rubbish into 20 sq. yds., and the Council, with the use of special vehicles with special containers, will remove the compacted rubbish during the night.

#### MARKET:

In talking about the changes that are taking place, I must make mention of the Market. The present market was erected in 1913, and with the parking space it occupies some 16 acres. The railway trucks that feed the market use the main West Rand and Soweto railway line, and the Railways advised the Council some years ago that, with the increase in passenger traffic, they could no longer undertake to continue to bring the railway trucks to the market, and that we must find a new site. For a long time the argument raged as to whether marketing was the function of the local authority, or whether it was a national responsibility, but eventually it was decided that we, as a City, should build the new market. The Council acquired a site on the old City Deep Mine, some 243 acres in extent, and plans are already well under way, and a start has been made on the levelling of the site for a market which will now occupy 160 acres when the buildings, sidings, etc., have been laid out. 16 acres originally, and 160 acres now!

One of the difficulties of a Market is that in the summer one has a surplus of produce, and in the winter produce is scarce. In order to even this out, it is planned that the new Market will eventually have 5 acres of refrigerated space and cool chambers, and space for the ripening of fruit, so that in times of plenty the surplus produce can be placed in cold storage and made available in times of scarcity.

A fundamental change has taken place in the method of marketing. Some years ago producers consigned their goods to the Market Master: it was then sorted into commodities, and municipal auctioneers offered the goods for sale. The City sent a mission overseas to study markets throughout the Western world, and it was found that today the auctioneer system is regarded as hopelessly out of date, and it has been decided to change. Now the producer consigns his goods to a Market Agent, and that Market Agent then negotiates the sale. This is how we will operate in the new Market. There will be 9 halls, 8 of which will be 1,000 feet long by 80 feet wide, and one 1,500 feet by 100 feet, and it is planned that at any one time it will be possible to offload some 300 railway trucks. Provision is also being made for a wholesale flower market. At the moment the flowers are mainly distributed by the Multiflora Market. A 13-acre site is being reserved in the new Market, and Multiflora will be establishing its headquarters there.

#### INDIAN MARKET:

In Johannesburg for years we have had a separate Indian Market from our normal produce market, but it is now intended to incorporate the Indian Market in the new Market area.

People from the country may not know that the Johannesburg Produce Market is the central market which serves a tremendously wide area. Produce is consigned here, bought by wholesalers, and then transferred all over the Transvaal and into the Free State. The new Market is going to be very different from the old, and on a very much bigger scale, It is felt that, with the change in marketing methods that is taking place, the refrigeration area is very, very essential, and will have the effect of helping the producer, in that prices will be more evenly maintained throughout the year.

As I have already said, the Railways informed us that we had to make a move, but when it came to the point of moving the Market, the Council has to meet the cost of building the railway line, although the Railways will get all the revenue from the produce carried. We have to pay the bill for marshalling yards, and for the line to the Market, and that will cost us R1,000,000, of the total R8,000,000 which will have to be spent on the Mcrket. In addition, it is necessary for us to plan a new Abattoir, which will be adjacent to the new Produce Market, and will occupy some 230 acres. It is anticipated that this will cost around R14,000,000.

#### SEWERAGE SERVICES:

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For some years Johannesburg has provided a metropolitan sewerage service. Johannesburg built large works, and has accepted the flow from surrounding areas rather than have a number of small works. Some of the areas to the north of Johannesburg have grown at a phenomenal and unanticipated rate, and when we laid down our sewerage mains, the areas to the north anticipated that the flow we would have to accept by 1985 would be 5,000,000 gallons per day. By 1960 they revised their estimate - after we had built the pipes from 5,000,000 to 8,000,000 being the anticipated flow by 1985, but it is already 6.7 million, and this is creating great problems for us because the quantity of water used in sewers doubles every 11 years, so that at our sewerage farms we have this mass of water. What do you do with water that has come from sewers? Before it can be put back in a stream it must be purified according to standards laid down under the Water Act. The Council is faced with this problem - to install very costly machinery to purify the water, or to try and use it. We have tried to use it. Portion of the water is used in our cooling towers at our Power Stations at Kelvin, but we have also developed the most intensive cattle breeding scheme in the Republic.

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That sounds a strong statement. We speak not of how many morgen per animal, but of how many animals per morgen. The sewage effluent is good for agriculture: the solids are good for manure and we have developed these farms on what was very poor agricultural ground. In so far as we can we grow our own fodder. One of the purposes of cattle breeding is to improve the quality of beef on the Johannesburg Market. We have two farms, one to the south and one to the north. The total area of the farms is nearly 7,000 acres, but only a limited portion is used for agricultural purposes. We now talk of four head per morgen, and slaughter animals are sold at approximately 15 months, and at that age they weigh about 800 lbs. Some of you farmers will know if that is good or bad - I don't. The stock used for the cattle breeding schemes are Angus, Hereford, Brown Swiss, Simmentaler, Charolais bulls, with a predominance of Africander, Hereford and Angus blood in the females.

#### RE-DEVELOPMENT OF BLIGHTED AREAS:

Some of the oldest established suburbs in Johannesburg are Jeppestown, Fairview and Troyeville, and they are now some 80 years old. In conjunction with the Department of Community Development, development of this area has now been frozen, and no further development can take place without permission of the Department of Community Development. These areas occupy roughly 176 acres, and it is anticipated that the whole of the three areas will be rebuilt. Portion of it will be a Municipal Housing Scheme, but for a portion it is expected that we will want to call in the assistance of private developers, who will have a predetermined plan in general principle of how the development is to take place, and private developers will be asked to take over portions of that ground for development, within the predetermined plan, as they feel will be advantageous. This is an area not far from the city. Its re-development will have the effect of bringing people within easy reach of the centre of the city, and it will be able to house a much larger population than it does today. It will be a good development, with people living under decent conditions.

Some of you may know the areas which we call Vrededorp and Pageview. They have been declared white group areas, although the areas have been occupied by Indians since the early days of Johannesburg. The residential area for Indians is Lenasia, some 18 miles to the south-west of the city. We have, in conjunction with the Department of Community Development, agreed that it would be grossly unfair to move the Indian traders from Vrededorp and Pageview without providing alternative facilities, so it has been agreed to establish a large Indian Bazaar in the vicinity of the Newtown Market. The ground has been expropriated, and the city, in conjunction with the Department of Community Development, is going to build a huge Asiatic Bazaar, which it is hoped will house the traders who will be displaced from the Vrededorp, Pageview and Newclare areas. This is to be a very ambitious scheme, and it will also act as an Urban Renewal Scheme in the Fordsburg area, and there will be a measure of equity for the Indian traders, who would otherwise have lost their trading opportunities.

#### BUSWAYS:

Another great problem in cities is getting the buses moving. They get bogged down in busy periods, and we have embarked on an experiment which we believe is unique, in that we are establishing a route which may only be used by buses. Our most congested area is Hillbrow. We have started this first bus scheme to serve the suburbs to the North/East (including Hillbrow). One of our streets, Joubert Street, is one-way and may only be used by buses, and we have carved a section off one of

/8. our Parks .....

our Parks to form a road where buses only may travel. Previously the travelling time taken to get to Hillbrow was 30 minutes, but since the inauguration of the scheme the time has been cut by half, and now a bus, which previously was held up by traffic, by taking this "bus only" road, can do the distance in 15 minutes, and that is proving of great advantage.

We have also introduced buses where there is a driver only, as our difficulty in Johannesburg is that we cannot get white crews for our Transport Department. We know the solution to our transport problem is to have more buses, but we cannot recruit the crews, and that is why we have bus cancellations and cannot provide the service. However, it is hoped that with the new "bus only" road, and with having buses where there is no conductor, the problem will be eased. We have introduced a coupon system whereby, if people purchase coupons, they get a large discount on their fares. This is to encourage the use of coupons, so that when they enter the one-man bus they just have to put the ticket in the machine for cancellation, and the driver is not involved in giving change. So far the system seems to be working very, very successfully.

#### NEW CIVIC CENTRE:

Another big change is taking place in Johannesburg. We are establishing a new Civic Centre in Braamfontein, where some 25 acres was acquired some time ago for this purpose. Some of the office blocks are now under construction, but it is something of a long-term project, depending on capital availability. We are also planning for a large number of additional parking garages to take the cars that come into town.

Johannesburg, as with all other cities throughout the world, is finding the financial implications of running a city more and more heavy. For instance, the money borrowed to build its expressways will have to be paid off, and interest will have to be paid on it, with no revenue coming in at all from this expenditure. I think towns throughout South Africa are eagerly awaiting the Government's reaction to the Borckenhagen Committee Report. This Committee was appointed some 11 years ago, and its report is now in the hands of the Government. All cities are wondering what relief will be given to them, when the State studies the recommendations of this Commission.

We also have a difficulty in that our capital expenditure programmes are controlled by the Central Treasury. They advise us of the amount they will allow us to raise by way of loans each year, and this is having a crippling effect on the necessary expansions that have to take place. To give you an indication of one costly undertaking - that of providing for the extension of sewerage works. The extension which will have to take place within the next 7 years will cost R59,000,000. This service is to cater, not only for Johannesburg, but also the surrounding areas from which we accept sewage.

As far as electricity is concerned, the Electrical Engineer told me this morning that 25 of the new projects going up, such as the Carlton Centre, the Standard Bank, the Trust Bank, the S.A.B.C. Headquarters, will create a peak demand for electricity which equals the total peak demand for electricity in the whole of the city 25 years ago in 1944. Think of this: 25 projects, and the peak demand they will create for electricity is equal to the total peak demand of 25 years ago. Quite staggering, isn't it? These are some of the problems with which we in the city have to grapple.

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Another factor which will have a fundamental influence on the city is the development of the big property promoting companies. They want to develop, not on a stand or two, but on a whole block, and this is going to change the pattern of the city, for the good, I am sure, because the development of blocks gives us these island sites, more room and more street room, and will, in the long-term, be of great benefit to the city.

In giving you these facts - a lot of them may be, and I hope a lot of them will be, meaningful. I have tried not to be boastful, for I do not want to create an impression that Johannesburg is bigger and better -I am just trying to get across the things I know are taking place, the problems they are creating, and the scale on which change is taking place.

Recently we had an exhibition at the Rand Show by our Forward Planning Department. Some five years ago the Council appointed its Chief Town Planner to establish a Forward Planning Section in the City Engineer's Department. His instructions were, not to worry about what is happening today, but to have his eye on what we must do today for what will take place in 10, 15 or 20 years' time. Before the section could really get to grips with the job, a mass of surveys had to be undertaken to provide the basic information. They are now trying to project and plan for what will take place in years to come.

In 1947 I was in the fortunate position of being able to attend a Conference in Toronto - a Conference called by the Municipal Research Bureau of Toronto. Canada was then celebrating its 100th birthday, and Toronto had asked 40 cities, with populations of over 1,000,000, to send six delegates to the Conference, and we discussed the development of metropolitan areas. It was brought home forcibly to us that no city can plan in isolation - that one must plan with one's neighbours - that planning must be a joint effort, and that one must try and co-ordinate the developments in various areas. This is one of the things that is so necessary in South Africa - to plan, not in isolation, but on a regional basis. Where metropolitan facilities are avilable, the local authorities should get together. The tendency overseas is to form regional planning authorities and for city units to become larger and larger.

We in Johannesburg feel the great need for planning, not only for ourselves, but for the areas surrounding Johannesburg to plan in conjunction with us, so that we can take a far-sighted view. At our recent Forward Planning exhibition at the Rand Show, one of the walls carried a quotation from a Town Planner as follows:-

#### "A PLANNER'S PHILOSOPHY

"Make no little plans. They have no magic to stir men's blood, And probably themselves will not be realised.

Make big plans. Aim high, in hope and work, Remembering that a noble, logical diagram, Once recorded, will never die But long after we are gone will be a living thing Asserting itself with ever-growing insistency.

> Remember that our sons and grandsons Are going to do things that will stagger us, And let your watchword be Order and your beacon Beauty."

I would like to leave this thought with you, that we must plan on a big scale, we must be imaginative, and we must try to plan for our sons and grandsons.

I now have great pleasure in declaring this Conference open.

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J.P. MALAN, Public Relations Office, P.O. Box 1049, Johannesburg.

Telephones Bus: 836-1911 Res: 44-2465

5 Jec. 1969

His Worship the Mayor

Herewith some

further facts and

statistica on "Changing

Johannesburg", as requested by you.

And

J. P. MALAN, Public Relations Office, P.O. Box 1049, Johannesburg.

Telephones Bus: 836-1911 Res: 44-2465

1 Dec. 1969

His Worchip the Mayor

Dear Un. Mayor. as mentioned to you on fiday, I have pleasure in submitting the attached suggestions or ideas which could be incorporated in your article on " Changing Johannesburg" - bearing in mind, though, that with such an article one has to stop somewhere or sometime, unless you are prepared to write a back . I also attack an article from a recent Time magazine, which may be of interest to you And PRO.

#### CHANGING JOHANNESBURG.

Wr. Bates

The City Engineer's Department advises that the area now to be added will cover 107 guare miles, which means that the total area will be 215 square miles.

The Council is also busy on its second ten-year scheme to improve existing arterial roads, at a cost of R14-million.

Council has so far provided seven parking garages which can accommodate 4,500 cars.

BUILDING:

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Parktown 8

Doornfontein,

as well as Ra.U.

In the five years, 1964-68, building plans to a value of R330million were passed. The figure of R100-million for 1968 was almost five times that for 1962.

Apart from high-rise buildings, the other significant development is that of multi-block complexes. In addition to the Carlton Centre, there are the Schlesinger Centre in Hillbrow and the recently announced Sanland scheme, around the present Langham Hotel.

Hardly a week passes without the announcement of yet another big development. Most of these reach for the sky - the latest is a block of flats in Berea which will rise to 540 ft. and contain 42 storeys above ground level.

Non& of these will, however, come near the Hillbrow micro-wave tower, which will be about 850 ft. and with its restaurant, become a popular attraction. (Hertzog Tower is 772 ft.).

Some of the vast building schemes underline the city's position as an educational centre : no less than five large campuses are either in the process of construction or on the drawing boards.

.../2. The Goudstad .....

The Goudstad College of Education is nearing completion; preliminary work has started on imposing campuses for the Johannesburg College of Education and the Randse Afrikaanse Universiteit, while the Witwatersrand College for Advanced Technical Education and the University of the Witwatersrand are looking forward to new campuses in Doornfontein and at Frankenwald respectively.

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BLIGHTED AREAS:

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Apart from urban renewal, the Council is busy on vast housing developments; Over the next five years is housing schemes, *R54* which will cost <del>R55</del>-million and house **9**,000 White families, <del>will</del> be undertaken.

In addition, the Council is building a thousand houses and flats in Newclare and Westbury for Coloureds. In Soweto it can look on its proud achievement of 65,000 houses; more are being built all the time.

GENERAL:

Another great need is to expand the city's electricity supply and the Council will spend about R22-million to increase the present capacity by a third.

In the cultural field there is a need for many new amenities, such as a new Art Gallery and a new Africana Museum. Apart from these Council amenities, the War Museum is to get a new home and a building is to be erected for the Museums of Man and of Science. A different, new attraction will be Santarama.

# EXTRACT FROM "GOLDEN AGE" BY A. P. CARTWRIGHT.

The modern generation may find it hard to believe how poor South Africa was before this great gold mining revival came. Listen to Mr. Havenga, Minister of Finance, explaining in 1931 why he did not propose to increase income tax.

> "It has been asked why I have not wiped out the whole of the deficit", he said. "But to do that would have involved an increase in the income tax percentage and the government has regarded it as its duty to avoid doing that ... "There are only 1,312 taxpayers in the Union with an income of over £2,000 a year, so that there is little to be gained by taxing the rich man further and any additional tax burden will have to be borne by the people as a whole. "Moreover the government has purposely not singled out the handful of men - there are only 142 of them in the whole Union with incomes of over £7,000 a year, because it is upon them

we are dependent for the expansion of our industries and for the provision, in difficult times, of work for a great number of people."

Today, in its old age, the Crown can look back on a career that is without parallel in mining history. It has produced more than 40,000,000 ounces of gold, which at today's price represents gross earnings of R1,000,000,000. No other mine has ever earned as much.

The Crown Mines company has paid out some R90,000,000 in dividends and earned R49,000,000 for the State - first for the Transvaal Colony, then for the Union of South Africa and finally for the Republic. It has employed over the years some five hundred thousand men and paid them wages and salaries that total R140,000,000.

To achieve these results three generations of men have mined more than 200,000,000 tons of rock, most of which has been hauled to the surface and crushed in the mills.

Today, if by some miracle you could collect that amount of rock in one place you might build a mountain half the size of Table Mountain.

Picture such a mountain in your mind's eye – and see it as the symbol of what the Crown has done for South Africa and its people.

PL/ZMB. 8.7.69.

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THE ASSOCIATION OF TRUST COMPANIES IN SOUTH AFRICA Conference - 1969 - Johannesburg

> DIE ASSOSIASIE VAN TRUSTMAATSKAPPYE IN SUID-AFRIKA Konferensie - 1969 - Johannesburg

OPENING ADDRESS BY HIS WORSHIP THE MAYOR OF JOHANNESBURG, COUNCILLOR PATRICK LEWIS

OPENINGSREDE DEUR SY EDELAGBARE DIE BURGEMEESTER VAN JOHANNESBURG. RAADSLID PATRICK LEWIS

When I was approached to open this Conference, it was suggested that I give the opening address, and I thought it might be fitting if I talked on CHANGING JOHANNESBURG - on some of the changes that are taking place today, changes which some of us in Johannesburg may be aware of, but of which we have not realised the full significance. I think for people from outside Johannesburg some of the changes may be of interest.

#### AREA AND DEVELOPMENT OF MINING GROUND:

Johannesburg, until recently, covered an area of 94.48 sq. miles, but a short time ago additions were made totalling an area of 15 sq. miles. Of the 94.48 sq. miles, however, some 23 sq. miles was proclaimed mining ground, and was, therefore, not available for development purposes. The mines which originally occupied that ground are now coming to the end of their lives, and the development of this ground for other purposes is now being considered.

Johannesburg's development has been lopsided. The business area has largely been built immediately north of the proclaimed mining area. The residential development is mainly to the north and east, with limited development to the south of the mining area. Now that the mining ground is to become available for other purposes it is going to knit the centre to the south by the use of the ground, and on one mine alone, namely, part of Crown Mines, it is anticipated that it will be possible to house resi-dentially, a population equal to that of the town of Springs, some 40,000 to 45 000 people. In addition to this to 45,000 people. In addition to this, a Commission of Inquiry was appointed some time ago to consider the incorporation into Johannesburg of an area to the south. The findings of the Commission are not yet known, but the case put forward by the Johannesburg Council is that an area of some 130 sq. miles (of which Soweto is 25 sq. miles) should be incorporated. If this is done, the imbalance of the city will be rectified, and we will then have development to the south comparable to that which has taken place to the north.

# RECREATIONAL AREA:

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A short time ago quite an imaginative scheme was passed by the Council, namely, to acquire ground on what we hope will be our southern boundary, that is, the Klip River. A large portion of this ground is already owned by the City Council and, by building a wall at the eastern boundary of the ground, it is hoped to be able to create a lake covering some 200 acres, which will provide a recreational region for the people

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of Johannesburg. In addition, as was reported in the Press this week, the Minister of Planning has agreed to a scheme to reserve as a recreational area, some 18,000 morgen at a place called Suikerbosrand, which starts near Heidelberg and continues along a range of hills in a westerly direction towards Johannesburg, and it is hoped to make this an open recreational area for the population of the Reef. The length of this area is approximately 11 miles and, at places, is 5 miles wide.

Various Municipalities on the Reef have had preliminary discussions, and have agreed that they will make a contribution to the capital cost and to the financing of such a scheme, to give the people of the Witwatersrand a recreational area very near to where they live. These changes are taking place, and are going to make a vast difference to the face of Johannesburg.

#### POPULATION EXPLOSION:

I would like to quote a few figures of the anticipated population explosion in Johannesburg, to give you an idea of the number of people for whom we will have to plan. In 1920 the population of Johannesburg of all races was 286,000. In 18 years it increased to half a million. In 1967 it was 1,300,000 and - by 1985 - that is in 16 years time, it is anticipated that the population will be 2,000,000. That is the human population.

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# VEHICLE POPULATION:

Now I would like to deal with the motor car population. In 1948 it was 71,000. Twelve years later, in 1960, it had doubled to 158,000. In the next 8 years there were another 100,000 cars, and by 1985 it is anticipated that there will be 400,000 vehicles on the roads. We will have more people; we will have more cars, but the street areas remain the same.

# FREEWAYS AND EXPRESSWAYS:

Johannesburg has embarked on a very large "freeways" system - portion of this is already in use and the remainder of the system should be open within the next two years. This project is to cost R64,000,000. I know unfavourable comparisons have been made between the road system of Johannesburg and that of Cape Town, and I want to congratulate Cape Town on what they have done. However, they have had to deal with a more sympathetic Provincial Council, which agreed to assist them some 4 or 5 years before the Transvaal Province agreed to assist Johannesburg. In addition, the contribution was at a higher percentage of the total cost, and in the total cost Cape Town was allowed to include the cost of the land, whereas in Johannesburg we have **?** had to exclude in our claim for contribution any costs in connection with the acquisition of land.

When we commenced the expressway system, we were thought to be very lucky in that we could take some of the expressways over old mining ground, but what a snare and a delusion that was, because a lot of this mining ground was mined in the very early days of Johannesburg. There are no diagrams now of the underground workings, and the source of the expressways is so high that the Council has been incommended in considerable expressions is so high that the Council has been incommended in considerable expressions in shoreing up the old mine workings before it was possible to build. In some cases it has been necessary to sink supports 150 feet before reaching solid ground. Another interesting fact is that into the pillars supporting the roads the engineers built "jacks" - similar to a motor-car jack, but on a very much bigger scale - so that, if subsequently there is subsidence, the pillars can be adjusted to height, and this has been a very,

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very costly part of the roadway scheme. I think I said the total cost will be something like R64,000,000, of which we are receiving a contribution from the Province and the National Transport Commission of only R21,000,000, which was calculated on the original cost cf R45.5 million. When the costs were subsequently increased, we were advised that the cost to be borne by the Government authorities would have to be based on the original estimate of cost.

#### AIR TRAVEL:

Another means of travel that is changing Johannesburg is the use of light aircraft. We have an airport - the Rand Airport - and I would like to give you some figures regarding the number of take-offs and landings. Just going back to 1962, the total for that year was 28,000 takeoffs and landings. By 1965 the number had increased to 80,000, and last year, for the first time, we topped the 100,000 number of planes alighting and taking off. That compares with something like 27,000 from Jan Smuts Airport.

Jan Smuts Airport is now not just a terminal airport - it used to be the end of the run from overseas, but with the opening of the airways to Australia and to South America, Jan Smuts Airport is becoming a "through" airport. Tremendous numbers of businessmen who wish to visit Australia, come to South Africa first, and then go on. Also, people in Africa who want to get to South America will now come south instead of going north. The number of passengers carried on S.A. Airways, a great number of whom start from Jan Smuts Airport, has increased fourfold in the last ten years, and the number of passengers carried last year was close on the 1 million mark.

#### BUILDING:

When thinking of the changes taking place in Johannesburg, one realises that a totally different form of building is being erected great tower blocks are going up, and there is a reason for this. Until a few years ago, we had Town Planning regulations which zoned the various areas of the city into height and use zones. There was another governing factor, and that was that the height of a building could not exceed a line drawn at a 59° angle from the other side of the street, so that the width of the street was a determining factor as to how high one could build and, as a result, most of our buildings were fairly squat. However, some years ago that regulation was changed, and the 59° factor was altered. In order to get people to set their buildings back from the immediate street boundary, it was agreed that if the building was set back by 5 feet, the ground floor area sacrificed could be built at a higher level. Naturally, as more rental is paid for ground floor space in a shopping area than for space on a higher level, it is necessary to be compensated to a greater extent for the square footage lost on the ground, thus, in certain areas, if a developer sacrifices one square foot on the ground, he can, in certain areas, build 6 sq. feet on an upper floor. Developers are encouraged to set back their buildings by a minimum of 5 feet with a maximum of 10 in order to get this bonus bulk on upper floors. The more the buildings are set back from the street the higher the buildings can be built. There is also the wish to encourage developers to build residential accommodation in the centre of the city. and here again, if residential accommodation is built instead of office accommodation, in an area zoned for offices, the developer can get additional bulk bonus. This has had a fundamental effect on the type of building that is being erected today. If you examine many of the buildings under construction, you will find they are prestige blocks

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where the ground floor area contains fountains and gardens, with the result that there is more air and light around the buildings. The whole pattern is changing.

#### CARLTON CENTRE:

I want to deal in some detail with just one project - the Carlton Centre - to show you what is happening. On an average, between the Carlton Centre, the new Standard Bank building and the Trust Bank building, only 35 of the ground floor area will be occupied by the buildings. The remainder will be open space, so you will realise what an effect this is having on opening up our city.

Let me speak about the Carlton Centre for a few minutes. The Centre is being erected on what previously was four city blocks, the intervening streets having been closed, and the site will, actually occupy six acres. This has meant a change in the services which previously went through > those streets. The basements of the Centre go down a total of 95 feet. When it was decided to launch this project, the owners realised there might be claims from the surrounding owners, because owing to the excavations, the foundations of their buildings might be affected, so that, before a square only yard of earth was removed from the site, the owners called in a firm of architects, and they surveyed all the buildings in the immediate vicinity. They photographed the cracks, they recorded the cracks so that they could get a factual position of the state of the buildings in the surrounding area before commencing their excavations. This was an extremely costly precaution, but they wanted to avoid claims being lodged against them for which they were not really responsible. Now, when you dig a hole of 95 ft precaution, but they wanted to avoid claims being lodged against them for which they were not really responsible. Now, when you dig a hole of 95 ft. you draw off the water from the surrounding area, and this will affect the dewa soil texture of that earth, because with this drainage teking place the Carlton Centre, naturally, will have to pump out the water that results from the digging of this huge hole.

On the Carlton Centre site they are building a huge office block, 50 storeys in height. Many of you know the Hertzog Tower - but the highest point of the Carlton office block will be higher than the Hertzog Tower quite staggering, isn't it? Higher than the Hertzog Tower, although it starts from a lower street level site. The Carlton Centre will have provision for the parking of 2,000 cars: the office area will be over 1,000,000 sq. feet; and it is anticipated that the employees in the office block will number between 6,000 and 7,000 persons. There is to be an observation tower on top of the office block, and it is anticipated that, as this will be a much better vantage point than the Hertzog Tower observation room, there will be half a million visitors per annum, whereas the Hertzog Tower has 300,000 visitors per year.

I have spoken of the office block. In addition, there will be the shopping centre, which will cover the whole area and be on a number of levels, and there will be a new hotel of 30 storeys in height, which will have 600 double bedrooms. It is anticipated that there will be 900 employees in this hotel, so that, with guests and employees, there could be approximately 2,000 people in that building at one time. It is impossible to predict the number of employees in the shops, or the customers there will be there at any one time during the day, but on this six-acre block there will be, at any one time, approximately 10,000 people.

This project has created immense problems for the city. Take the sewers for instance. It was never anticipated that there would be such a large congregation of people on one site, and the Council has been put to

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300,000?

tremendous expense in providing additional sewerage facilities. It is expected that the site will use some 500,000 gallons of water a day, and over the day it will be necessary to accept a sewer effluent of some 300,000 gallons. However, there are peak hours and valleys, and the Council has had to increase facilities so that at any one time in the peak hours, sewerage effluent at the rate of 875,000 gallons per day can be accepted. This is the type of problem we have had to provide for, which was not anticipated years ago when the mains were laid down.

The total cost of the Carlton Centre will be in the region of R67,000,000, of which R7.9 million was paid for the land. Construction costs will be something like R46,000,000: but what I know will really interest you, is the figure which I have been given for interest, which has to be paid out during the construction period, before income starts - and that is a mere R3.2 million!

In addition to the shopping centre, the office block and the hotel, there is to be a very large exhibition hall, which will occupy 57,000 sq. feet. The speed of the lifts in the various blocks will be from 500 ft. to 1,400 ft. per minute. Electricity - what could the maximum demand be at any one time? This had to be calculated, for in the Electricity Department we have to cater for the peak demand. With all the offices, shops, hotel, air-conditioning plants, etc., the maximum demand for electricity, at any one time, is expected to exceed the peak demand for a city like Kimberley, and all concentrated on this six-acre block.

The problem of rubbish removal is another factor. <sub>c</sub> How is it possible to dispose of all the rubbish accumulated in an office block and shopping centre and hotel of this size? The normal method of rubbish removal is by bin, but how many bins would be required to take off the rubbish from the Carlton Centre, and they would take up valuable space. The Centre will have to install a machine to enable them to compact rubbish. They anticipate that this machine can compact 80 ar yds. of rubbish into 20 sq. yds., and the Council, with the use of special vehicles with special containers, will remove the compacted rubbish during the night.

#### MARKET:

In talking about the changes that are taking place, I must make mention of the Market. The present market was erected in 1913, and with the parking space it occupies some 16 acres. The railway trucks that feed the market use the main West Rand and Soweto railway line, and the Railways advised the Council some years ago that, with the increase in passenger traffic, they could no longer undertake to continue to bring the railway trucks to the market, and that we must find a new site. For a long time the argument raged as to whether marketing was the function of the local authority, or whether it was a national responsibility, but eventually it was decided that we, as a City, should build the new market. The Council acquired a site on the old City Deep Mine, some 243 acres in extent, and plans are already well under way, and a start has been made on the levelling of the site for a market which will now occupy 160 acres when the buildings, sidings, etc., have been laid out. 16 acres originally, and 160 acres now!

One of the difficulties of a Market is that in the summer one has a surplus of produce, and in the winter produce is scarce. In order to even this out, it is planned that the new Market will eventually have 5 acres of refrigerated space and cool chambers, and space for the ripening of fruit, so that in times of plenty the surplus produce can be placed in cold storage and made available in times of scarcity.

A fundamental change has taken place in the method of marketing. Some years ago producers consigned their goods to the Market Master: it was then sorted into commodities, and municipal auctioneers offered the goods for sale. The City sent a mission overseas to study markets throughout the Western world, and it was found that today the auctioneer system is regarded as hopelessly out of date, and it has been decided to change. Now the producer consigns his goods to a Market Agent, and that Market Agent then negotiates the sale. This is how we will operate in the new Market. There will be 9 halls, 8 of which will be 1,000 feet long by 80 feet wide, and one 1,500 feet by 100 feet, and it is planned that at any one time it will be possible to offload some 300 railway trucks. Provision is also being made for a wholesale flower market. At the moment the flowers are mainly distributed by the Multiflora Market. A 13-acre site is being reserved in the new Market, and Multiflora will be establishing its headquarters there.

#### INDIAN MARKET:

In Johannesburg for years we have had a separate Indian Market from our normal produce market, but it is now intended to incorporate the Indian Market in the new Market area.

People from the country may not know that the Johannesburg Produce Market is the central market which serves a tremendously wide area. Produce is consigned here, bought by wholesalers, and then transferred all over the Transvaal and into the Free State. The new Market is going to be very different from the old, and on a very much bigger scale, It is felt that, with the change in marketing methods that is taking place, the refrigeration area is very, very essential, and will have the effect of helping the producer, in that prices will be more evenly maintained throughout the year.

As I have already said, the Railways informed us that we had to make a move, but when it came to the point of moving the Market, the Council has to meet the cost of building the railway line, although the Railways will get all the revenue from the produce carried. We have to pay the bill for marshalling yards, and for the line to the Market, and that will cost us R1,000,000, of the total R8,000,000 which will have to be spent on the Mc~ket. In addition, it is necessary for us to plan a new Abattoir, which will be adjacent to the new Produce Market, and will occupy some 230 acres. It is anticipated that this will cost around R14,000,000.

# SEWERAGE SERVICES:

For some years Johannesburg has provided a metropolitan sewerage service. Johannesburg built large works, and has accepted the flow from surrounding areas rather than have a number of small works. Some of the areas to the north of Johannesburg have grown at a phenomenal and unanticipated rate, and when we laid down our sewerage mains, the areas to the north anticipated that the flow we would have to accept by 1985 would be 5,000,000 gallons per day. By 1960 they revised their estimate - after we had built the pipes from 5,000,000 to 8,000,000 being the anticipated flow by 1985, but it is already 6.7 million, and this is creating great problems for us because the quantity of water used in sewers doubles every 11 years, so that at our sewerage farms we have this mass of water. What do you do with water that has come from sewers? Before it can be put back in a stream it must be purified according to standards laid down under the Water Act. The Council is faced with this problem - to install very costly machinery to purify the water, or to try and use it. We have tried to use it. Portion of the water is used in our cooling towers at our Power Stations at Kelvin, but we have also developed the most intensive cattle breeding scheme in the Republic.

That sounds a strong statement. We speak not of how many morgen per animal, but of how many animals per morgen. The sewage effluent is good for agriculture: the solids are good for manure and we have developed these farms on what was very poor agricultural ground. In so far as we can we grow our own fodder. One of the purposes of cattle breeding is to improve the quality of beef on the Johannesburg Market. We have two farms, one to the south and one to the north. The total area of the farms is nearly 7,000 acres, but only a limited portion is used for agricultural purposes. We now talk of four head per morgen, and slaughter animals are sold at approximately 15 months, and at that age they weigh about 800 lbs. Some of you farmers will know if that is good or bad - I don't. The stock used for the cattle breeding schemes are Angus, Hereford, Brown Swiss, Simmentaler, Charolais bulls, with a predominance of Africander, Hereford and Angus blood in the females.

#### RE-DEVELOPMENT OF BLIGHTED AREAS:

Some of the oldest established suburbs in Johannesburg are Jeppestown, Fairview and Troyeville, and they are now some 80 years old. In conjunction with the Department of Community Development, development of this area has now been frozen, and no further development can take place without permission of the Department of Community Development. These areas occupy roughly 176 acres, and it is anticipated that the whole of the three areas will be rebuilt. Portion of it will be a Municipal Housing Scheme, but for a portion it is expected that we will want to call in the assistance of private developers, who will have a predetermined plan in general principle of how the development is to take place, and private developers will be asked to take over portions of that ground for development, within the predetermined plan, as they feel will be advantageous. This is an area not far from the city. Its re-development will have the effect of bringing people within easy reach of the centre of the city, and it will be able to house a much larger population than it does today. It will be a good development, with people living under decent conditions.

Some of you may know the areas which we call Vrededorp and Pageview. They have been declared white group areas, although the areas have been occupied by Indians since the early days of Johannesburg. The residential area for Indians is Lenasia, some 18 miles to the south-west of the city. We have, in conjunction with the Department of Community Development, agreed that it would be grossly unfair to move the Indian traders from Vrededorp and Pageview without providing alternative facilities. so it has been agreed to establish a large Indian Bazaar in the vicinity of the Newtown Market. The ground has been expropriated, and the city, in conjunction with the Department of Community Development, is going to build a huge Asiatic Bazaar, which it is hoped will house the traders who will be displaced from the Vrededorp, Pageview and Newclare areas. This is to be a very ambitious scheme, and it will also act as an Urban Renewal Scheme in the Fordsburg area, and there will be a measure of equity for the Indian traders, who would otherwise have lost their trading opportunities.

#### BUSWAYS:

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Another great problem in cities is getting the buses moving. They get bogged down in busy periods, and we have embarked on an experiment which we believe is unique, in that we are establishing a route which may only be used by buses. Our most congested area is Hillbrow. We have started this first bus scheme to serve the suburbs to the North/East (including Hillbrow). One of our streets, Joubert Street, is one-way and may only be used by buses, and we have carved a section off one of

our Parks to form a road where buses only may travel. Previously the travelling time taken to get to Hillbrow was 30 minutes, but since the inauguration of the scheme the time has been cut by half, and now a bus, which previously was held up by traffic, by taking this "bus only" road, can do the distance in 15 minutes, and that is proving of great advantage.

We have also introduced buses where there is a driver only, as our difficulty in Johannesburg is that we cannot get white crews for our Transport Department. We know the solution to our transport problem is to have more buses, but we cannot recruit the crews, and that is why we have bus cancellations and cannot provide the service. However, it is hoped that with the new "bus only" road, and with having buses where there is no conductor, the problem will be eased. We have introduced a coupon system whereby, if people purchase coupons, they get a large discount on their fares. This is to encourage the use of coupons, so that when they enter the one-man bus they just have to put the ticket in the machine for cancellation, and the driver is not involved in giving change. So far the system seems to be working very, very successfully.

#### NEW CIVIC CENTRE:

Another big change is taking place in Johannesburg. We are establishing a new Civic Centre in Braamfontein, where some 25 acres was acquired some time ago for this purpose. Some of the office blocks are now under construction, but it is something of a long-term project, depending on capital availability. We are also planning for a large number of additional parking garages to take the cars that come into town.

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Johannesburg, as with all other cities throughout the world, is finding the financial implications of running a city more and more heavy. For instance, the money borrowed to build its expressways will have to be paid off, and interest will have to be paid on it, with no revenue coming in at all from this expenditure. I think towns throughout South Africa are eagerly awaiting the Government's reaction to the Borckenhagen Committee Report. This Committee was appointed some 11 years ago, and its report is now in the hands of the Government. All cities are wondering what relief will be given to them, when the State studies the recommendations of this Commission.

We also have a difficulty in that our capital expenditure programmes are controlled by the Central Treasury. They advise us of the amount they will allow us to raise by way of loans each year, and this is having a crippling effect on the necessary expansions that have to take place. To give you an indication of one costly undertaking - that of providing for the extension of sewerage works. The extension which will have to take place within the next 7 years will cost R59,000,000. This service is to cater, not only for Johannesburg, but also the surrounding areas from which we accept sewage.

As far as electricity is concerned, the Electrical Engineer told me this morning that 25 of the new projects going up, such as the Carlton Centre, the Standard Bank, the Trust Bank, the S.A.B.C. Headquarters, will create a peak demand for electricity which equals the total peak demand for electricity in the whole of the city 25 years ago in 1944. Think of this: 25 projects, and the peak demand they will create for electricity is equal to the total peak demand of 25 years ago. Quite staggering, isn't it? These are some of the problems with which we in the city have to grapple.

Another factor which will have a fundamental influence on the city is the development of the big property promoting companies. They want to develop, not on a stand or two, but on a whole block, and this is going to change the pattern of the city, for the good, I am sure, because the development of blocks gives us these island sites, more room and more street room, and will, in the long-term, be of great benefit to the city.

In giving you these facts - a lot of them may be, and I hope a lot of them will be, meaningful. I have tried not to be boastful, for I do not want to create an impression that Johannesburg is bigger and better -I am just trying to get across the things I know are taking place, the problems they are creating, and the scale on which change is taking place.

Recently we had an exhibition at the Rand Show by our Forward Planning Department. Some five years ago the Council appointed its Chief Town Planner to establish a Forward Planning Section in the City Engineer's Department. His instructions were, not to worry about what is happening today, but to have his eye on what we must do today for what will take place in 10, 15 or 20 years' time. Before the section could really get to grips with the job, a mass of surveys had to be undertaken to provide the basic information. They are now trying to project and plan for what will take place in years to come.

In 1947 I was in the fortunate position of being able to attend a Conference in Toronto - a Conference called by the Municipal Research Bureau of Toronto. Canada was then celebrating its 100th birthday, and Toronto had asked 40 cities, with populations of over 1,000,000, to send cix delegates to the Conference, and we discussed the development of metropolitan areas. It was brought home forcibly to us that no city can plan in isolation - that one must plan with one's neighbours - that planning must be a joint effort, and that one must try and co-ordinate the developments in various areas. This is one of the things that is so necessary in South Africa - to plan, not in isolation, but on a regional basis. Where metropolitan facilities are avilable, the local authorities should get together. The tendency overseas is to form regional planning authorities and for city units to become larger and larger.

We in Johannesburg feel the great need for planning, not only for ourselves, but for the areas surrounding Johannesburg to plan in conjunction with us, so that we can take a far-sighted view. At our recent Forward Planning exhibition at the Rand Show, one of the walls carried a quotation from a Town Planner as follows:-

#### "A PLANNER'S PHILOSOPHY

"Make no little plans. They have no magic to stir men's blood, And probably themselves will not be realised. Make big plans. Aim high, in hope and work, Remembering that a noble, logical diagram, Once recorded, will never die But long after we are gone will be a living thing Asserting itself with ever-growing insistency.

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Remember that our sons and grandsons Are going to do things that will stagger us, And let your watchword be Order and your beacon Beauty." ł

I would like to leave this thought with you, that we must plan on a big scale, we must be imaginative, and we must try to plan for our sons and grandsons.

I now have great pleasure in declaring this Conference open.

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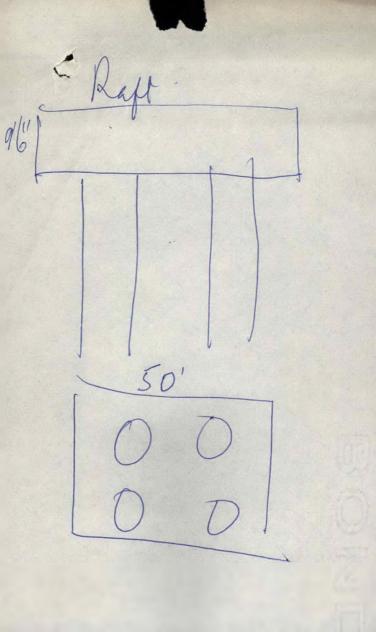
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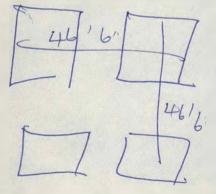
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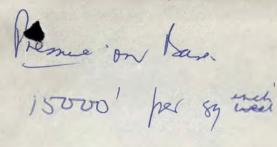
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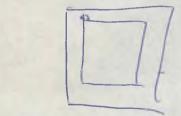


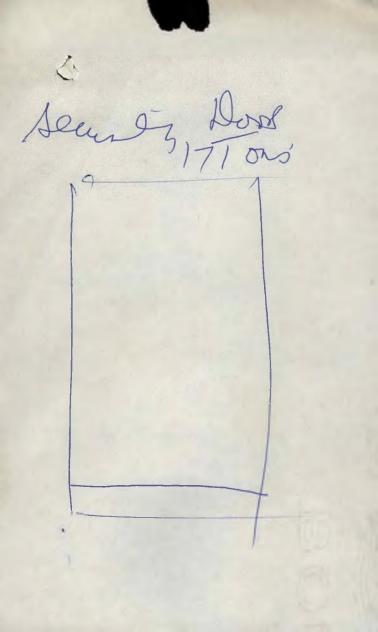
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Security 100' 30'





# THE STANDARD BANK CENTRE, JOHANNESBURG, IN PERSPECTIVE.

Public attention during the past twelve months has been focused on the erection of the new Standard Bank Headquarter Building. This attention has been worldwide and the construction of the building has created intense interest and to a certain extent controversy. The main point of interest was the structural solution adopted and as the construction is now complete an assessment of this solution can be made. The tower block consists of a central concrete core which supports three levels of prestressed concrete cantilever brackets. These brackets carry the prestressed concrete hangers which in turn support the perimeter beams of the 30 floors of the tower. The core and cantilevers were cast insitu but the hangers, perimeter beams and all floors are precast. To bring the technique and problems arising on the site into perspective, it is necessary to understand the reasons why the hanging construction was adopted.

There is nothing fundamentally ingenuous or revolutionary about constructing a building upside down and the proposal to hang the typical floors was a consequence of the basic planning and not the main motivation. The construction technique provided a solution to certain planning problems and was used by the Architects to create a powerful architectural impact. The use of the construction in this way has been criticised as a "gimmick" but is as valid as cladding a building in expensive marble.

The structural system eliminated large columns in the Banking Hall at the base of the tower and enabled a close integration of the mechanical services into the construction. No one planning factor viewed in isolation justifies the solution adopted but as an integrated concept the architects have created a very exciting and functional building.

The building is comparatively expensive by South African standards. This is, however, far more a function of the standard of mechanical services and the height of the building than of the construction technique adopted. The cost of the structure is approximately 22% of the total cost of the building. This compares favourably with other highrise buildings, particularly as it includes the additional cost of achieving the high standard of concrete finish on the external facade. The cost of hanging of the floors cannot be easily isolated but the direct material and labour costs are approximately 3% of the total cost of the building. It is clear therefore that not only is the cost of the structure very much as one would anticipate for a building 450 feet high but criticism of the method of construction on the basis of cost is unfounded.

In any discussion on the site difficulties, it is easy to lose sight of the tremendous construction and planning problems which the

contractors/.....

contractors and designers have successfully overcome. This included the unusual method of founding the building on large diameter shafts carried down 150 feet from the surface; the sliding of the largest building core attempted in South Africa to a height of over 500 feet with a maximum error of half an inch and the cliff hanging exercise of constructing the 18 feet deep cantilever brackets into space 400 feet above the ground. In all cases virtually completely new ground was being broken and this engineering pioneering if anything intensified when it came to the construction of the typical floors. It has been argued that it would have been better to construct these floors with insitu concrete. The contractors were given a free choice in this matter and there is no doubt that an earlier start could have been made using insitu techniques. However, the rapid progress on the job during the last few months and the high standard of finish obtained on the perimeter beams points to the reasonableness of the choice to construct the work in precast concrete.

On all building contracts, difficulties occur on site and it says a great deal for the building and planning team that these difficulties have been as isolated as they have. Before discussing the main difficulties it would be well to deal with the problems which have not occurred - the rumours which inevitably arise on a contract which is so strongly in the public's eye.

Rumours have circulated that the building has been bending and twisting under the effect of heating by the sun. Temperature movements of a structure are normal and expected and the top of the building sways approximately one inch due to temperature variations. This has created no difficulty on site although it had to be taken into account when setting out the various parts of the construction.

Secondly, the building leans; it is in fact vertical. Perhaps the most disturbing rumour has been that the building is underdesigned structurally. This also is untrue. Very few structures have been as intensively analysed with extensive use being made of a computer to check out any secondary effects which may reduce the safety of any portion of the structure.

Despite all precautions, however, a problem did arise during the erection of the floors and one fateful Friday morning in October 1968 the City's traffic was brought near chaos by the closing of the portion of Simmonds Street. The press coverage indicated that a 9th floor perimeter beam had moved during erection. This was technically inaccurate in that the movement had in fact occurred on the supporting hangers.

The 9th floor differs from the remainder of the structure in that it is separated from the hanger by a horizontal sliding bearing which transfers vertical loads but allows horizontal movements. The reason for this bearing is complex but in essence relates to the secondary frame stresses imposed during prestressing of the main cantilevers. Consequently, at the temporary stage of erection the stability of the structure relies entirely on the prestressing which is applied through the hanger. At

later/....

later stages, the hanger is completed and positively tied back to the core at the 8th and subsequent floors. A normal stage of the erection procedure required the floor below to be hung from the partly completed floor over and it was at this stage of additional loading that the trouble occurred. The difficulties therefore arose during an erection condition which would not be repeated again during the life of the building. The reasons for the movement lay in the prestressing which was applied to the hanger. As is often the case, the difficulty was due to a combination of This included an optimistic view of the erection conditions factors. and an unwise choice of prestressing system for the short cables supporting the 9th floor. The prestressing system has shown itself to be ideal for the longer cables used elsewhere on the contract and it was not unreasonable to standardise for the whole project.

In retrospect, however, it is obvious that a sufficient margin of safety did not exist during erection of this particular floor. However, building is not an exact science and really comprises a whole series of judgement decisions balancing safety and economics. The judgement was undoubtedly correct as far as final working conditions were concerned but the behaviour of the structure during erection was very different from the final conditions. In order not to overstress the concrete at the completed stage, it was necessary to keep the prestressing force as low as possible and this factor further complicated the design judgement. The consequence of this situation was that the design left too little leeway for the unexpectedly large site variations which occurred. What was a comparatively minor prestressing problem unfortunately did have serious consequences on the contract in that it caused a major upheaval of the work on site.

The success of overcoming these problems and the basic soundness of the design and erection procedure has been amply demonstrated since the trouble occurred. The construction is less than 10% behind the original programme which includes all other delays on the contract from adverse weather conditions and other difficulties on site. Those who are involved in the building industry will know that this is not unreasonable for a major contract. For a building as complex and unusual as the Standard Bank Centre, the successful completion with so few problems has been a major achievement and says a great deal for the skill of the South African building industry.

# RECEIVED - 9 JUL 1969

#### ADDRESS OF HIS WORSHIP THE MAYOR

#### 1.00 Crown Mines Project

Planning period Site Centre Projected Population

Shopping and Entertainment Centre Sub-Centres Primary Schools Secondary Schools Open Space

Golf Course

Housing

Buildings

# 2.00 Rand Mines Properties Limited

Total Freehold Immediately useable Freehold Freehold within Municipal area of Johannesburg Percentage of total Municipal area

3.00 Use of Mine Dumps

- 2 Years
  Approximately 1,600 acres
  3 Miles from the City Hall
  A balanced community of 46,815- 1 45,000
- : The size of Rosebank
- : 4
- : 10
- : 4
- : 327 acres of integrated open space
- : 200 acres; Gary Player is Resident Professional. Competition Standard Course.
- : Approximately 18 different types of housing ranging from single dwellings on their own pieces of ground, through courtyard and terrace houses, to high-rise flats.
- : (i) To start 1971 on first sector; i.e. 229 acres 11,300 persons, expected completion 1976
  - (ii) Expected completion whole project : 1986
- : 13,800 acres
- : Approximately 8,450 acres
- : 7,820
- : 13%
- : The entire belt of mining land and mine dumps is being worked on at present :
  - (i) The City of Johannesburg is dumping on certain dumps at a rate of 500 cubic yards a day;
  - (ii) The grassing and landscaping of dumps is being done at an increased rate;

- (iii) Areas adjacent to dumps are being landscaped by landscape architects;
- (iv) Research is underway on methods to build on the tops and sides of dumps;
- (v) Streams are being cleaned and cut in channels;
- (vi) Debris and weeds are being cleared over the entire area.

--- 000 ----

RAND MINES PROPERTIES LIMITED

The Corner House, 63 Fox Street, Johannesburg.

3rd July, 1969.

# MEMORANDUM TO : MR. A.C. PETERSEN

### ADDRESS OF HIS WORSHIP THE MAYOR OF JOHANNESBURG

1.00: It is difficult at this stage to give information of the type requested by his Worship the Mayor i.e. figures that illustrate salient points of our proposed development.

However, there are some "key" ideas which may be of value and these are listed below. His Worship the Mayor is most probably aware of these but we list them nevertheless.

- 2.00: The peculiar growth of Johannesburg i.e. around large tracts of land that have been exempt from urban development is unique in the world and the fact that this land is now, in one lump, available for development provides Johannesburg with an opportunity that is unique in the world, i.e. to have vast tracts of land (13.8% of the municipal area, some within  $\frac{1}{2}$  mile of the hard-core of the C.B.D.) available to relieve all the pressures that act on a city the size of Johannesburg.
  - 3.00: Johannesburg is at a critical stage in its development; its development has gone through a full cycle. This is indicated by the fact that the first Urban Renewal programmes are now underway.
    - Johannesburg must now decide about its future form, especially about the role of the Central Business District.

The city can become part of a large fairly amorphous megalopolis on the one hand or it can be a discrete centre to a greater Johannesburg.

The decisions made now will determine the future form.

- The thinking guiding our overall plan supports one basic and major town 4.00: planning idea i.e. the fact that the existing Central Business District is the true "heart" of the metropolitan area and our ideas all tend to
  - (i) strengthen that heart;
  - (ii) revitalize it and support it against unreasonable decentralization.
  - So it can be said that one of the primary aims of Rand Mines Properties! development is to support the C.B.D. The investment in the C.B.D. is enormous and it was made over an extended period. The whole metropolitan area has a vested interest in the central city; therefore it should be reinforced in its position and be given the opportunity to remain dynamic and viable. Any attempts at weakening its position, through indiscriminate decentralization should be strongly discouraged.

e future "garden" of the city.

2.

3/7/69.

- 5.00: Our plans also see the south as being the future "garden" of the city. The South as a unit has the opportunity to become this garden area of the metropolis, with the addition of areas of great recreational potential in the far South and the general restructuring of the whole of the South. This would be accomplished through changes made to the micro-climate, the amenities and the access which would actually make of it a better place to live than the North. Then will it be possible through subsequent growth and development for the South to attain a state of equilibrium or balance which it requires.
  - Our thinking at present sees a "Garden Route" linking the various projects and also including large Metropolitan parks.
  - The future population of the city will see the "Garden South" as one of the major contributions the present generation has made to the development of Johannesburg into a fine and memorable city.
- 6.00: We hope to introduce a new concept to South Africa i.e. the comprehensively designed warehousing estate. We will demonstrate that warehouses can be fine examples of architecture and groups of warehouses fine examples of town planning. In these estates, careful attention will be given to the design of the buildings, the layout of the area, the landscaping of the pavements etc.
- 7.00: We are co-operating with the City in the development of our property to provide for a possible "first ever" rapid transit system for Johannesburg. This will significantly improve the already excellent access to the central city from the South.

It is envisaged that this will consist of express bus routes.

- 8.00: Finally we are in the process of designing the largest co-ordinated development in the history of South Africa. The residential area we are creating, which will house 40,000 to 50,000 people, will provide maximum amenities for all as well as excellent access to places of work, shopping and play.
  - This development will cater for all life styles and all interest groups and it is hoped that it will make a series of important contributions to the South African way of life.
  - The centre for this 'new town in town' will be about the size of the Rosebank shopping centre but will have a much greater component of entertainment.

9.00: Summary:

- (a) Johannesburg is at a crucial stage of its development;
- (b) Johannesburg has a unique opportunity provided by the potential of mining land;
- (c) Rand Mines Properties Limited would like to assist in some important "firsts":

- (i) -

Rand Mines Props.

- (i) An integrated "Garden" area and Garden Route to the South;
- (ii) Development of areas to support the C.B.D.;
- (iii) The concept of comprehensively designed warehousing estates;
- (iv) First ever rapid transit;
- (v) A 'new town in town' providing the best of both city and country.

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7/3/69

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RIG. ASB. ALLE MEDEDELINGS AAN DIE STADSINGENIEUR. ALL COMMUNICATIONS TO BE ADDRESSED TO THE CITY ENGINEER.

> STAD JOHANNESBURG



### CITY OF JOHANNESBURG

### STADSINGENIEURSAFDELING CITY ENGINEER'S DEPARTMENT

B. L. LOFFELL Stadsingenieur City Engineer

SPREEK ASSEBLIEF/PLEASE ASK FOR

TELEFOON/PHONE 836-1911 Posbus/P.O. Box 4323

VERW.NO. M - 43-5

MNR/MR. Hall.

30. 6. 1969

Mr. J. Buckler, Mayor's Secretary.

OFFICE OF THE MAYOR JOHANNESBURG	
DATE RECD2-7-1969	-
REF. No	
DATE ACK.	
REFERRED TO	

Dear Mr. Buckler,

I have had an opportunity of studying the address given recently by the Mayor to the Association of Trust Companies of South Africa.

The information contained in the address, as far as it affects my Department has been corrected in discussion with the Mayor. I would suggest that as the Mayor is to use this address as a basis for future talks during his year of office, my Department will be pleased to supply details of one or two developments which might be of interest. I will send these on shortly.

I understand that detailed information regarding air traffic at Jan Smuts Airport has been submitted to the Mayor.

Yours sincerely,

ACTING CITY ENGINEER.

GV.

HOW JUCH GOLD (IN OLINCES) HAS BREN PRO-DUCED BY THE MINES IN THE JUB. JUNICIPAL AROA IN THEIR LIFE TIME? INFORTMATION BECRIVED FRONT MR. HESSIAN 838-8211 P.G.O. DIRFT. CHATTBER OF MINES. D. VILLA GR Dave MAIN (STILL PRODUCING ON ASSTALL SCALIE). 4,349,770 02. D. CITY Dack (STILL PRODUCING). 17,601,537 02 3. CROWN MINZS UP TO 1968. (BIGGEST FILDE IN THE AREA) 44,624,743 02 (D. ROBINSON Deel. (Bitogi Gosing). ToTAL : 14,657,505 02 81,233,555 02 THE FORLOWING STARL MINES (MOST DE THEON GOSED) DIO TRODUCIE BUT THERE IS A DIFFICULTY IN ASCERTAINING WHATHER THEY FALL INTO THE JUB. VILLAGE MAIN & GEEF, TREASURY, NEW MERIOT, GINSBERG, NOURSE MINNES, BONANZA, NEW UNITIO, NEW SOCH, AURORA WIST, JUBILIE, SALISBURY, JUMPLIRS, CITY AND SUBURBAN, WOLHNEER, MEYER AND CHARLEON, SLEN CAIRN, NEW RETROSS, MAY CONSOLE DAVID, JuditeR, FEREIRRA DREP, KNIGHTS DREP, WITW. DEEP, KNIGHTS CENTRAL, JUNPERS COME TREASURY.

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Naw HERIOT.		1,300,000
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Naw Jock		1,700,000
Jubilian		400,000
SALISBURY		420,000
Junpeires.		800,000
CITY + SUBURBAN		2,700,000
WOR HUTER		2,700,000
MEYER + CHARLION		2,600,000
JURITER.		800,000
Fühnichga Duck		6,700,000

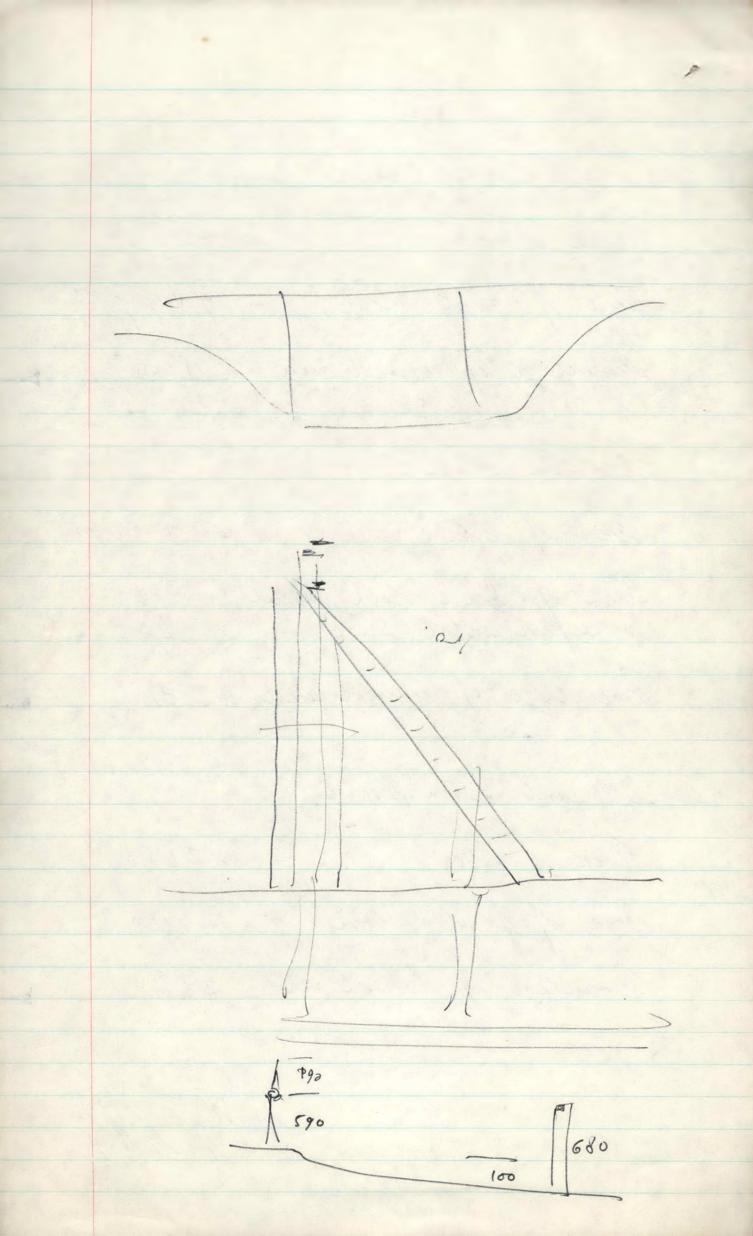
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Arust Bank Centre = 42684 ~' area of site = 7897 " area of point block 18.5% Aerculage of covered area = barllon bentre = 208060 " area of site area of Office Hock, Motel s Departmental Hore 65022 " Gercenlage of covered area = 31% Mandard Bank Centre 42683 <sup>D'</sup> Area of site = area of point block = 11695 " 27 % Percentage of borered area = D 1. 6. J. 4. /



Mr Buckler The Mayor raised a query on the statistics provoled by the Dept of buil aviation regarding aircraft movements at fan Amuto airport. There was in fact an error in this paires. In the year 1958, the figures for local flights wave as follows. arrivals. 3337 Departures 3317 Would you be good enough to pass this information to the Mayor. Dates 26/0/69.

27th June 1969.

PL/ZMB.

Dear Mr. Shute,

I do want to thank you for your letter of the 23rd June 1969 and the information given to me regarding the Carlton Centre. This will help me in my talks as I now can give accurate information.

Thank you, too, for your message of sympathy regarding the death of Councillor Pieter Roos. His death will certainly be a very severe loss to the Council. Many is the man who, having had his severe heart attack some three years ago, would have eased up and not continued to serve the community as he did.

Once again, thanks for the information given to me.

With kind regards,

I am,

Yours sincerely,

PATRICK LEWIS, MAYOR.

Mr. M. G. Shute, General Manager, Carlton Centre Ltd., P.O. Box 4587, JOHANNESBURG.



44. Main Street, Johannesburg Telephone 836-8721 Telegrams "Anmercosa" Box 4587 Johannesburg CARLTON CENTRE LTD

PD/MGS/PP

23rd June, 1969.

DIRECTORS: H. F. OPPENHEIMER (CHAIRMANI R. J. GOSS (DEPUTY CHAIRMANI R. J. GOSS (DEPUTY CHAIRMAN) D. B. H F E. MANAGING DIRECTOR) C. J L GRIFFITH H. S. MORONY A. M. ROSHOLT S. SPIRO, M.C. J. G. WARD K. R. WILLIAMS (BRITISH) ALTERNATE DIRECTORS: D. P. MARRIOTT J. A. SINCLAIR D. L. TITLESTAD HIS WORSHIP the Mayor of Johannesburg Councillor Patrick Lewis, Office of the Mayor, P.O. Box 1049, JOHANNESBURG.

×.

J.	
	OFFICE OF THE MAYOR
	JOHANNESBURG
	DATE RECD. 25-6-1969
	REF. No. CA 17
	DATE ACK.
	REFERRED TO

Dear Mr. Mayor,

I should like to thank you for your secretary's letter dated 10th June which followed on from our recent telephone conversation concerning statistics and general information relating to Carlton Centre.

As requested, I have compiled a memorandum which sets out the up to date statistics and information relating to the Centre and two copies of the memorandum are enclosed, together with one copy of your address to the Association of Trust Companies in South Africa, which you were kind enough to send me.

I fully appreciate that our information sheet covers many more details than you have time to include in your forthcoming address, however some of the additional material that I have provided may appeal to you and you may feel that it is worth including.

I believe that there are three aspects of the project which perhaps deserve greater emphasis, more particularly as two of them will have a direct impact on the City of Johannesburg. I refer to the comprehensive nature of the convention facilities planned in the Hotel, the design implications of the Shopping Centre which, over an area of approximately 14 acres will be entirely traffic-free and, finally, the introduction of "deep space" office layouts as a result of the  $\frac{1}{2}$  acre floors in the Office Tower. I am also enclosing for your information a copy of the most recent brochure on the Centre, which will serve to illustrate the magnitude of the scheme with particular reference to the 7 floors that lie below ground level.



- 2 -

His Worship the Mayor of Johannesburg

23rd June, 1969.

May I take this opportunity, on behalf of all those concerned with Carlton Centre, to express to you and to your colleagues in the Council our warmest sympathy upon the recent death of Councillor Peter Roos. Councillor Roos was closely acquainted with the details of our project and,with the other members of the Management Committee, gave a great deal of his time to our many problems. We had a very high regard for his sense of civic responsibility and he will be sadly missed by us all.

Mr. Mayor, I should like to thank you for having taken the trouble to obtain information from us concerning Carlton Centre and if there is any further way in which we can be of assistance please do not hesitate to let us know.

Yours sincerely,

M. G. SHUTE GENERAL MANAGER

### CARLTON CENTRE LIMITED

# STATISTICS AND GENERAL INFORMATION RELATING TO CARLTON CENTRE

### 1. PROMOTERS

The promoters of Carlton Centre are the Anglo American Corporation of South Africa Limited and The South African Breweries, Limited.

### 2. AREA OF SITE AT GROUND LEVEL

The total area of the site at ground level amounts to 260,000 sq.ft. or  $6\frac{1}{2}$  acres.

### 3. AREA OF CONSTRUCTION

Below	ground		1.6	million	sq.ft.
	ground		1.9	million	sq.ft.
Total	area of	construction	3.5	million	sq.ft.

### 4. GROUND COVERAGE ON MAIN BLOCK

Surface area of main block	196,339 sq.ft.
Area covered by buildings	55,140 sq.ft.
Percentage covered	28%
Area of open space	3½ acres

### 5. <u>COMPONENTS</u>

The five principal components of the project are:-

- (a) The Office Tower.
- (b) An Hotel of international standard.
- (c) The Shopping Centre.
- (d) An Exhibition Hall.
- (e) Basement and above ground parking facilities.

### 6. OFFICE TOWER

(a)	Number of floors	-	50
(b)	Height	-	660 ft.(higher than the Hertzog Tower)
(c)	Gross area per floor	-	21,875 sq.ft. (over ½ acre)
(b)	Gross area of Tower	-	1,053,459 sq.ft.

- (e) Total net rentable area in Tower, 714,872 sq.ft. exclusive of Observation Platform
- (f) Working population of Tower approx. 6,000
- (g) Number of passenger lifts 18 lifts arranged in three banks of six serving different sections of the Tower. In addition, one express lift serving the Observation Platform.
- (h) Speed of "High-rise" lift bank 1,400 ft. per minute
- Speed of present fastest lift in South Africa Hertzog Tower, 700 ft. per minute.
- (j) The design of the building contains all services within the central "core" and virtually eliminates the presence of structural columns on all floors.
- (k) The large floor areas introduce the concept of deepspace office layouts for the first time in South Africa.
- The 50th Floor of the Tower will be a spacious observation platform which is expected to attract over 300,000 visitors a year.

### 7. INTERNATIONAL HOTEL

- (a) Number of rooms 603, the largest hotel in the Southern Hemisphere (the old Carlton Hotel had 275 rooms)
- (b) Bed capacity approximately 1,200
- (c) Number of floors 31
- (d) Number of restaurants 4
- (e) Number of cocktail lounges 5
- (f) Capacity of Ballroom 1,000 people
- (g) Capacity of additional 8 function rooms 500 people
- (h) The top floor of the building will provide an open-air roof-garden with heated swimming pool.
- (i) The Hotel can be regarded as the first hotel in South Africa to be built to international standards for conventions.
- (j) The management of the Hotel will be provided by Western International Hotels of Seattle, the third largest hotel chain in the world.
- (k) Approximate total number of staff 800.

### 8. <u>SHOPPING CENTRE</u>

- (a) The Shopping Centre is located on the first two floors below ground level across the entire main site, beneath Main Street and beneath the block south of Main Street.
- (b) The total area of the Shopping Centre is approximately 14 acres. Excluding the pedestrian mall areas and courts and the separate storage areas, the total net rentable area of shops is 430,780 sq.ft. This exceeds the area of the Rosebank Shopping Centre.

- (c) The Shopping Centre will consist of two major department stores and 140 other shops to provide a fully comprehensive retail facility in the Johannesburg central city area.
- (d) Escalators, lifts and stairs will link the shopping levels with the garden plaza at street level and three open courts will alleviate any sensation of being "under ground".
- (e) The largest court contains a pool that will operate as an open-air ice rink during the winter months and as a fountain during the balance of the year.

### 9. EXHIBITION HALL

- (a) The Exhibition Hall is located on the top floor of the building on the block south of Main Street.
- (b) It will provide column-free airconditioned exhibition space of 57,000 sq.ft., more than double the size of the Empire Hall at Milner Park.
- (c) It will be the first modern exhibition facility to be built in the Johannesburg downtown.
- (d) The Hall will accommodate a year-round programme of exhibitions, on lines similar to Earls Court in London, consisting of both specialised trade exhibitions and shows of public appeal. The renaissance of a South African Motor Show is largely due to the creation of these exhibition premises.
- (e) The Hall will be operated by Industrial Exhibition Organisers (Pty.) Ltd. a subsidiary of Carlton Centre Limited.

### 10. PARKING

- (a) 2,000 car parking spaces will be provided of which
   1,280 are below ground and 720 in the above ground
   "Parkade" comprising the six floors immediately below
   the Exhibition Hall on the block south of Main Street.
- (b) Access to and egress from the parking levels is achieved through four pairs of ramps leading from three different streets surrounding the Centre.
- (c) Of the four exit ramps, three emerge at street level at traffic light controlled intersections.
- (d) The garage levels will be used both by all-day parkers and by shoppers and other casual visitors to the Centre.

### 11. EXCAVATION

(a) The excavation necessary to permit the construction of the below ground levels was one of the largest ever undertaken anywhere in the world for a commercial building project.

- (b) The excavation covered five acres horizontally and was 95 ft. in depth. The amount of soil and rock removed represented approximately 1 million tons.
- (c) The maximum depth of the Office Tower foundations is 200 ft.
- (d) The necessary lateral support for the surrounding streets was provided by means of a special reinforced concrete bracing grid across the site which will be entirely removed when the casting of the permanent below ground floors has been completed.
- (e) The excavation entailed the de-watering of the site since the original water-table across the site was at a depth of approximately 40 ft. Before the de-watering was commenced a crack survey was undertaken of all buildings in the 14 city blocks surrounding the site.

### 12. ROAD CLOSING

- (a) With the support of the City Council of Johannesburg, a successful application was made to the Administrator of the Transvaal for the closing of those portions of Fox and Smal Streets intersecting the site.
- (b) In granting authority for the closure of the streets the Administrator stipulated that the closed portions of the roads and the four surrounding city blocks that comprised the project should be registered as one consolidated site.
- (c) The total area of the roads that were closed amounts to 1.33 acres.

### 13. SERVICES

(a)	<u>Telephones</u> :	A new 10,000 line automatic telephone exchange will be sited on one of the basement levels of the project which will provide service to Carlton Centre and the surrounding area.
(b)	Electricity:	The power capacity of Carlton Centre is 25,000 K.V.A. to cope with anticipated consumption which is likely to exceed the consumption of the city of Kimberley, inclusive of mining operations.
(c)	Air- <u>conditionina</u>	The central system produces filtered air, cooling, heating and airconditioning. The refrigeration plant has a capacity of 5,000 tons of refrigeration. This equals the capacity of approximately 50,000 domestic refrigerators of average size.
(ð)	<u>Water</u> :	The inflow of water per 8 hour day has been estimated at 1,010,000 gallons. This means that the inflow <u>per minute</u> at Carlton equals the average <u>weekly</u> consumption of a

suburban house.

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- (e) <u>Gas</u>: Carlton's gas consumption for cooking and other services totals 7,000,000 British Thermal Units per hour, the equivalent of 7,000 domestic gas ranges.
- (f) <u>Sewerage</u>: There are 1,600 points discharging into the sewage system which can handle between 900,000 and 1,000,000 gallons of effluent per day, if worked to capacity.
- (g) <u>Refuse</u>: It is estimated that a total of 150 cubic yards of dry refuse will be cleared from the complex per day, after compaction.

### 14. FINISH TO EXTERIOR OF BUILDINGS

The finish to the exterior concrete of all the buildings at street level and above will not involve the application of any other material. The stone in the concrete will be exposed by means of a special process to provide a rough textured finish over all exterior surfaces.

### 15. COMPLETION DATES

- (a) Parking areas and the two retail levels will be completed during 1970.
- (b). The Office Tower, the Hotel and the Exhibition Hall will be completed during 1971.

### 16. PROJECT COST

The total cost of the project will be approximately R67m of which R7.9m relates to the land.

PD/MGS/PP 20th June, 1969. - 5 -

RIG ASSEBLIEF ALLE MEDEDELINGS AAN DIE STADSINGENIEUR ALL COMMUNICATIONS TO BE ADDRESSED TO THE CITY ENGINEER

> STAD JOHANNESBURG



## CITY OF JOHANNESBURG

B. L. LOFFELL STADSINGENIEUR CITY ENGINEER

VERW. NO. P/F

STADSINGENIEURSAFDELING CITY ENGINEER'S DEPARTMENT

SPREEK ASSEBLIEF/PLEASE ASK FOR

MNR./MR. Hooper

TELEFOON/PHONE 836-1911 Posbus/P.O. Box 4323

20, 6, 1969

The Mayor's Secretary, Municipal Offices, JOHANNESBURG.

	OFFICE OF THE MAYOR JOHANNESBURG
	REF. No. 40/20
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Dear Mr. Buckler,

THE ASSOCIATION OF TRUST COMPANIES IN SOUTH AFRICA.

I thank you for your letter AO/20 of the llth June 1969 and enclose herewith, as requested, some comments and additional information which I hope will be of future use to His Worship, The Mayor.

Yours sincerely,

ACE(H)/JWH/AM.

DIE BRIEF SAL IN DIE ANDER AMPTELIKF TAAL AAN U GESTUUR WORD INDIEN U DIT BINNE SEWE DAE NA DIE BRIEFDATUM HIERBO SKRIFTELIK VERSOEK. IF DESIRED, A SIMILAR LETTER IN THE OTHER OFFICIAL LANGUAGE WILL BE SENT TO YOU ON YOUR WRITTEN REQUEST MADE WITHIN 7 DAYS OF THE DATE OF THIS LETTER.

### 1. GENERAL:

The paper as a whole is an excellent summary of the situation and in the limited time available for the talk gives sufficient detail to make the address interesting without being tedious with an over emphasis on statistics.

The following comments are offered as additional information and, where indicated, give slight adjustments to meet present situations.

### 2. POPULATION EXPLOSION:

The figures given in the paper are for the Metropolitan Area which nearly corresponds with the Magisterial Area.

### 3. BUILDINGS:

There are two objectives in setting back buildings, viz:

- (a) To provide more light and avoid the concrete canyon effect resulting from the original zoning.
- (b) To provide wider pavements in areas of high pedestrian concentrations.

Developers must set back at least five feet and for set-backs of between 5 and 10 feet, and where a servitude is registered in favour of the Council, then bonus bulk is provided. Developers who set back more than 10 feet or provide open areas on their sites considered to be a civic amenity, may recover lost bulk lost on upper floors at a 1 to 1 ratio.

The extent to which buildings set back from their boundaries may project above the 59 line is determined by the percentage of the site occupied by the building, i.e. a point block erected on a city block may be of unlimited height provided building frontages do not exceed 45% of the respective street frontages.

4. CARLTON CENTRE:

Mention might be made of the problem of refuse removal. If the refuse produced every day by this complex had to be handled in the conventional way, the Council would have the vast task of removing over one thousand polythene bins every night. The labour situation in the future would, to consider one aspect only, make this impossible. We have accordingly set about rationalising the system. In collaboration with the Consultants for the Centre it has been decided to install great baling presses which will compress the refuse from the building into containers of 30 cu. yd. capacity, which will be mechanically removed. It can be seen that containerisation is confined not only to shipping.

5. MARKET:

Of the 243 acres the market is being developed on 190 acres and a further 34 acres is being reserved for businesses closely allied to marketing, i.e. prepacking of fresh produce and Multiflora has been allocated 13 acres with 6 acres for future extension.

Between the Highveld and Lowveld seasons there is hardly any valley period these days. In summer, for example, potatoes come from the Eastern Transvaal and in winter they come from an area near Pietersburg.

OFFICE OF THE MAYOR JOHANNESBURG
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The layout is designed with large areas being used for beautification. These, if needed, can be used for additional parking areas or for extensions to the market halls. As presently planned some 1,500 parking spaces have been provided.

The site is so extensive that a main watercourse traversing the area had to be canalised and decked with a drain 13'6" wide and 8'0" high.

### 6. INDIAN MARKET:

The last paragraph of this item makes reference to the abattoir.

The abattoir will occupy some 70 acres on a total site of 230 acres, the balance of which will be available for development by the allied trading interests on which the meat distribution depends.

It is anticipated that the abattoir proper will cost around R14 million.

### 7. <u>SEWERAGE SERVICES</u>:

This is an excellent summary of the situation. The only points which might be considered concern the future re-use of water. Instead of saying (third line from bottom of page 7) - "we have tried to use it", one might say that Johannesburg was the world pioneer in re-using purified sewage effluent for industrial purposes - having used effluent from its Klipspruit Sewage Works for cooling purposes at the Orlando Power Station as long ago as 1938.

To use purified effluent in this way, i.e. as a second use, saves water, if you will realise that Escom uses 40 million gallons per day of Vaal River water. In the future we will have to go further. The resources of the Vaal are limited and so are the possibilities for augmenting it. We must, therefore, all be prepared for the day when it may be necessary to purify sewage effluents to the point where they are as good as our natural waters and can be used for all purposes - as is indeed already being done in Windhoek today. There, over 20% of the potable water supply is sewage effluent purified to the highest standard by a new process developed by the C.S.I.R.

Also, one half of the cyanide used by the gold mines for the extraction of gold is produced from methane gas given off in the digestors at the Council's Klipspruit Sewage Works. The sale of this gas to the African Explosives and Chemical Industries Company brings in approximately R30,000 a year.

	OFFICE OF THE MAYOR JOHANNESBURG
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### MARKAFDELING MARKET DEPARTMENT SSR/CMP

TELEFOON NO.-TELEPHONES.

Markkantore Market Offices

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3337777 834-7358

Markmeester (Privaat kantoor) Market Master (Private Office)

> Rig asseblief alle mededelings aan die MARKMEESTER, Posbus 577, JOHANNESBURG. All communications should be addressed to THE MARKET MASTER,

THE MARKET MASTER, Box 577, JOHANNESBURG.

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Verw. no. Ref. No.

> Mayor's Secretary, Office of the Mayor, C I T Y H A L L.

### Newtown, Johannesburg

17th June 1969.

OFFICE OF THE M	AYOR
JOHANNESBURG	5 /
RECD. 18-6-1969 REF. No. AO	120
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MAYOR'S ADDRESS TO THE 1969 CONFERENCE OF THE ASSOCIATION OF TRUST COMPANIES IN SOUTH AFRICA.

Thank you for your letter, Ref. No. AO/20, dated the llth instant enclosing a copy of the Mayor's Address for my comment. I will deal with the sections of the Address under the headings "MARKET" and "INDIAN MARKET", viz. -

### MARKET

With regard to the statement made that the buildings, sidings, etc. at the new City Deep Market will occupy 160 acres of land, this is more or less correct but I would point out that the balance of the 243-acre site, namely, 83 acres, is being held in reserve for future development.

I would also refer to the method of sale adopted at the Newtown Market in the past, and would respectfully draw the Mayor's attention to the fact that although there was a Municipal Agency to which farmers could send their produce, licensed commission agents have been operating on the Market since its inception in 1913. The Municipal Agency was closed down in 1951 because it was found that it could not compete with the agents who had direct contact with the farmers in the Platteland through their travellers who visited them periodically in order to retain their business and seek new business. The Market Master had no representatives in the Platteland with the result that the aggressive sales campaign conducted by the agents' travellers eventually resulted in the Municipal Agency going out of business. In short, it could not compete with private enterprise.

Up to 1965 when the Council's Marketing Mission returned from its Overseas Study Tour, all produce was sold by auction at the Newtown Market. The Mission found that this method of sale was obsolete on the larger markets overseas because it was too time-consuming and caused unnecessary price fluctuations, and for these reasons private treaty or out-of-hand sales conducted by agents operating on the markets had superseded auction sales. Consequently private treaty sales were introduced at the Newtown Market with success and this will be the method of sale at the new City Deep Market.

Only when a commodity is in short supply will auction be resorted to - i.e. when there is insufficient produce to satisfy all the buyers present will it be sold by auction.

Since private treaty sales were introduced at the Newtown Market towards the end of 1965 it is estimated that only 2% of the sales take place by auction. This means that the agents' salesmen have become proficient in the evaluation of produce in terms of supply and demand and are able to satisfy the buyers and producers as far as price is concerned; when produce is scarce it is dear - when it is in good supply it is cheaper. It will be seen therefore, that the price is still determined by supply and demand, the same as it was by auction.

### INDIAN MARKET

In the first paragraph under this heading the Mayor states 'in Johannesburg for years we have had a separate Indian Market from our normal produce market, but it is now intended to incorporate the Indian Market in the new Market area'. If the Mayor is referring to the so-called Diagonal Street Indian Market I would say that it is hoped to incorporate this Market at City Deep but as far as I know there is no legislation to compel Indian traders at present in Diagonal Street to go to City Deep. In any case, it is considered that this will be brought about by urban renewal. It is possible that some of the <u>retailers</u> from the Diagonal Street Market will be accommodated in the proposed new Indian Bazaar in Fordsburg which has now been approved by the Government.

I should also point out that there has always been a small Indian Market attached to the Newtown Market in Wolhuter Street comprising thirteen small business premises. These traders who are mainly wholesalers, will be transferred to City Deep and accommodation has been reserved for them. Accommodation will also be provided for those wholesalers in the Diagonal Street Market who wish to go to City Deep. Remember that the new market at City Deep will be a <u>wholesale</u> produce market.

I have read the rest of the Mayor's Address with great interest but feel it is outside my sphere to comment on the items other than those referring to marketing particularly as the information given is largely factual.

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BRITISH CONSULATE-GENERAL,

P. O. BOX 10101,

JOHANNESBURG.

17th June, 1969

Dear Mr. Buckler,

Thank you very much for sending me copies of the Mayor's address to the Association of Trust Companies in South Africa.

As requested, I am sending a copy to Sir Alfred Nicholas.

Yours sincerely,

(R. A. Farquharson) Acting Consul-General

J.A. Buckler, Esq., Office of the Mayor, P. O. Box 1049, JOHANNESBURG.

OFFICE OF THE MAYOR **JOHANNESBURG** DATE RECD. REF. No. .. DATE ACK. REFERRED TO .....

BY HAND.

17th June 1969.

JB/ZMB.

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Dear Mr. Farquharson,

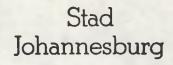
As promised by the Mayor, Councillor Patrick Lewis, I am sending herewith a copy of his address "Changing Johannesburg" which you kindly undertook to forward to Sir Alfred Nicholas. The Mayor has asked me to enclose a further copy, as he feels you may wish to have one for your own use.

Yours sincerely. MAYOR'S SECRETARY.

Mr. R. A. Farquharson, Acting Consul-General for the United Kingdom, British Consulate-General, BP Centre (8th Floor), Cor. Kerk & Harrison Sts., JOHANNESBURG. ALL COMMUNICATIONS TO BE ADDRESSED TO THE GENERAL MANAGER. P.O. BOX 699, JOHANNESBURG RIG ALLE MEDEDELINGS AAN DIE HOOFBESTUURDER, P.K. BUS 699, JOHANNESBURG

City of Johannesburg GM/ESP





ELECTRICITY DEPARTMENT ELEKTRISITEITS-AFDELING

Phone/Foon 836-3601 Telegraphic Address ) Telegramadres

**JOHELECT** 

Please ask for/Spreek asseblief Mr./Mnr.

Reference ) Yours/U Verwysing ) Ours/Ons .....

Head Office: President Street, West. Hoofkantoor: Presidentstraat-Wes.

12th June, 1969.

Mr. J.A. Buckler, Mayor's Secretary, Office of the Mayor, Municipal Offices, CITY OF JOHANNESBURG.

Dear Mr. Buckler,

I have just received your minute of the 11th June and enclosure but, in the light that the Mayor has already delivered this address and that I am completely immersed in preparations for departure to the A.M.E.U. Convention at Umtali next week, I would very much appreciate being allowed some time until I return before attempting the critical comment that you request.

Yours sincerely.

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If desired, a similar letter in the other official language will be sent to you on your written request made within 7 days of the date of this letter Die brief sal in die ander landstaal aan u gestuur word indien u dit binne sewe dae na die briefdatum hierbo skrittelik versoek.

a production and a 10/6/69 mfs. IN bates CGD X 319 has not gol all the date the mayor ve plight movements etettet is seehing Intas soon as it is available, will give I to the mayor. Tred to rue the Mayor to day on X 200 Une Desplaned mayor away Je the aflenson. D

11th June 1969.

AO/20

JB/ZMB.

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I enclose a copy of an address given by the Mayor recently to the Association of Trust Companies in South Africa and he asks for your critical comment. Will you please also let him know whether the information is correct and whether there are any further details which you feel would be appropriate under the various headings.

Yours sincerely,

MAYOR'S SECRETARY.

similar letters to above addressed to:-

Mr. B. L. Loffell, City Engineer
Mr. H. M. Marsh, CED
Mr. E. J. Hall, CED
Councillor M. L Neppe
Mr. S. S. S. Robinson, Market Master
Mr. J. W. Hooper, CED
Mr. R. Leishman, G. M., Electricity Dept.

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10th June 1969.

JB/ZB.

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Dear Mr. Shute,

I enclose two copies of the address by the Mayor, Councillor Patrick Lewis, about which he spoke to you this morning and he will appreciate any comments or additional information you may be able to give him in regard to the section dealing with the Carlton Centre.

Yours sincerely,

BAS MAYOR'S SECRETARY.

Mr. Mark Shute, Carlton Centre, P.O. Box 4587, JOHANNESBURG.

### THE ASSOCIATION OF TRUST COMPANIES IN SOUTH AFRICA Conference - 1969 - Johannesburg

### DIE ASSOSIASIE VAN TRUSTMAATSKAPPYE IN SUID-AFRIKA Konferensie - 1969 - Johannesburg

### OPENING ADDRESS BY HIS WORSHIP THE MAYOR OF JOHANNESBURG, COUNCILLOR PATRICK LEWIS

### OPENINGSREDE DEUR SY EDELAGBARE DIE BURGEMEESTER VAN JOHANNESBURG, RAADSLID PATRICK LEWIS

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When I was approached to open this Conference, it was suggested that I give the opening address, and I thought it might be fitting if I talked on CHANGING JOHANNESBURG - on some of the changes that are taking place today, changes which some of us in Johannesburg may be aware of, but of which we have not realised the full significance. I think for people from outside Johannesburg some of the changes may be of interest.

### AREA AND DEVELOPMENT OF MINING GROUND:

Johannesburg, until recently, covered an area of 94.48 sq. miles, but a short time ago additions were made totalling an area of 15 sq. miles. Of the 94.48 sq. miles, however, some 23 sq. miles was proclaimed mining ground, and was, therefore, not available for development purposes. The mines which originally occupied that ground are now coming to the end of their lives, and the development of this ground for other purposes is now being considered.

Johannesburg's development has been lopsided. The business area has largely been built immediately north of the proclaimed mining area. The residential development is mainly to the north and east, with limited development to the south of the mining area. Now that the mining ground is to become available for other purposes it is going to knit the centre to the south by the use of the ground, and on one mine alone, namely, part of Crown Mines, it is anticipated that it will be possible to house residentially, a population equal to that of the town of Springs, some 40,000 to 45,000 people. In addition to this, a Commission of Inquiry was appointed some time ago to consider the incorporation into Johannesburg of an area to the south. The findings of the Commission are not yet known, but the case put forward by the Johannesburg Council is that an area of some 130 sq. miles (of which Soweto is 25 sq. miles) should be incorporated. If this is done, the imbalance of the city will be rectified, and we will then have development to the south comparable to that which has taken place to the north.

### RECREATIONAL AREA:

A short time ago quite an imaginative scheme was passed by the Council, namely, to acquire gound on what we hope will be our southern boundary, that is, the Klip River. A large portion of this ground is already owned by the City Council and, by building a wall at the eastern boundary of the ground, it is hoped to be able to create a lake covering some 200 acres, which will provide a recreational region for the people

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of Johannesburg. In addition, as was reported in the Press this week, the Minister of Planning has agreed to a scheme to reserve as a recreational area, some 18,000 morgen at a place called Suikerbosrand, which starts near Heidelberg and continues along a range of hills in a westerly direction towards Johannesburg, and it is hoped to make this an open recreational area for the population of the Reef. The length of this area is approximately 11 miles and, at places, is 5 miles wide.

Various Municipalities on the Reef have had preliminary discussions, and have agreed that they will make a contribution to the capital cost and to the financing of such a scheme, to give the people of the Witwatersrand a recreational area very near to where they live. These changes are taking place, and are going to make a vast difference to the face of Johannesburg.

### POPULATION EXPLOSION:

I would like to quote a few figures of the anticipated population explosion in Johannesburg, to give you an idea of the number of people for whom we will have to plan. In 1920 the population of Johannesburg of all races was 286,000. In 18 years it increased to half a million. In 1967 it was 1,300,000 and - by 1985 - that is in 16 years time, it is anticipated that the population will be 2,000,000. That is the human population.

### VEHICLE POPULATION:

Now I would like to deal with the motor car population. In 1948 it was 71,000. Twelve years later, in 1960, it had doubled to 158,000. In the next 8 years there were another 100,000 cars, and by 1985 it is anticipated that there will be 400,000 vehicles on the roads. We will have more people; we will have more cars, but the street areas remain the same.

### FREEWAYS AND EXPRESSWAYS:

Johannesburg has embarked on a very large "freeways" system - portion of this is already in use and the remainder of the system should be open within the next two years. This project is to cost R64,000,000. I know unfavourable comparisons have been made between the road system of Johannesburg and that of Cape Town, and I want to congratulate Cape Town on what they have done. However, they have had to deal with a more sympathetic Provincial Council, which agreed to assist them some 4 or 5 years before the Transvaal Province agreed to assist Johannesburg. In addition, the contribution was at a higher percentage of the total cost, and in the total cost Cape Town was allowed to include the cost of the land, whereas in Johannesburg we have had to exclude in our claim for contribution any costs in connection with the acquisition of land.

When we commenced the expressway system, we were thought to be very lucky in that we could take some of the expressways over old mining ground but what a snare and a delusion that was, because a lot of this mining ground was mined in the very early days of Johannesburg. There are no diagrams now of the underground workings, and the weight of the expressways is so high that the Council has been involved in considerable expense in shoreing up the old mine workings before it was possible to build. In some cases it has been necessary to sink supports 150 feet before reaching solid ground. Another interesting fact is that into the pillars supporting the roads the engineers built "jacks" - similar to a motor-car jack, but on a very much bigger scale - so that, if subsequently there is subsidence, the pillars can be adjusted to height, and this has been a very,

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very costly part of the roadway scheme. I think I said the total cost will be something like R64,000,000, of which we are receiving a contribution from the Province and the National Transport Commission of only R21,000,000, which was calculated on the original cost of R45.5 million. When the costs were subsequently increased, we were advised that the cost to be borne by the Government authorities would have to be based on the original estimate of cost.

### AIR TRAVEL:

Another means of travel that is changing Johannesburg is the use of light aircraft. We have an airport - the Rand Airport - and I would like to give you some figures regarding the number of take-offs and landings. Just going back to 1962, the total for that year was 28,000 takeoffs and landings. By 1965 the number had increased to 80,000, and last year, for the first time, we topped the 100,000 number of planes alighting and taking off. That compares with something like 27,000 from Jan Smuts Airport.

Jan Smuts Airport is now not just a terminal airport - it used to be the end of the run from overseas, but with the opening of the airways to Australia and to South America, Jan Smuts Airport is becoming a "through" airport. Tremendous numbers of businessmen who wish to visit Australia, come to South Africa first, and then go on. Also, people in Africa who want to get to South America will now come south instead of going north. The number of passengers carried on S.A. Airways, a great number of whom start from Jan Smuts Airport, has increased fourfold in the last ten years, and the number of passengers carried last year was close on the l million mark.

### BUILDING:

When thinking of the changes taking place in Johannesburg, one realises that a totally different form of building is being erected great tower blocks are going up, and there is a reason for this. Until a few years ago, we had Town Planning regulations which zoned the various areas of the city into height and use zones. There was another governing factor, and that was that the height of a building could not exceed a line drawn at a 59° angle from the other side of the street, so that the width of the street was a determining factor as to how high one could build and, as a result, most of our buildings were fairly squat. However, some years ago that regulation was changed, and the 59° factor was altered. In order to get people to set their buildings back from the immediate street boundary, it was agreed that if the building was set back by 5 feet, the ground floor area sacrificed could be built at a higher level. Naturally, as more rental is paid for ground floor space in a shopping area than for space on a higher level, it is necessary to be compensated to a greater extent for the square footage lost on the ground, thus, in certain areas, if a developer sacrifices one square foot on the ground, he can, in certain areas, build 6 sq. feet on an upper floor. Developers are encouraged to set back their buildings by a minimum of 5 feet with a maximum of 10 in order to get this bonus bulk on upper floors. The more the buildings are set back from the street the higher the buildings can be built. There is also the wish to encourage developers to build residential accommodation in the centre of the city, and here again, if residential accommodation is built instead of office accommodation, in an area zoned for offices, the developer can get additional bulk bonus. This has had a fundamental effect on the type of building that is being erected today. If you examine many of the buildings under construction, you will find they are prestige blocks

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where the ground floor area contains fountains and gardens, with the result that there is more air and light around the buildings. The whole pattern is changing.

### CARLTON CENTRE:

I want to deal in some detail with just one project - the Carlton Centre - to show you what is happening. On an average, between the Carlton Centre, the new Standard Bank building and the Trust Bank building, only 35% of the ground floor area will be occupied by the buildings. The remainder will be open space, so you will realise what an effect this is having on opening up our city.

Let me speak about the Carlton Centre for a few minutes. The Centre is being erected on what previously was four city blocks, the intervening streets having been closed, and the site will actually occupy six acres. This has meant a change in the services which previously went through those streets. The basements of the Centre go down a total of 95 feet. When it was decided to launch this project, the owners realised there might be claims from the surrounding owners, because owing to the excavations, the foundations of their buildings might be affected, so that, before a square yard of earth was removed from the site, the owners called in a firm of architects, and they surveyed all the buildings in the immediate vicinity. They photographed the cracks, they recorded the cracks so that they could get a factual position of the state of the buildings in the surrounding area before commencing their excavations. This was an extremely costly precaution, but they wanted to avoid claims being lodged against them for which they were not really responsible. Now, when you dig a hole of 95 ft., you draw off the water from the surrounding area, and this will affect the soil texture of that earth, because with this drainage taking place the Carlton Centre, naturally, will have to pump out the water that results from the digging of this huge hole.

On the Carlton Centre site they are building a huge office block, 50 storeys in height. Many of you know the Hertzog Tower - but the highest point of the Carlton office block will be higher than the Hertzog Tower quite staggering, isn't it? Higher than the Hertzog Tower, although it starts from a lower street level site. The Carlton Centre will have provision for the parking of 2,000 cars: the office area will be over 1,000,000 sq. feet, and it is anticipated that the employees in the office block will number between 6,000 and 7,000 persons. There is to be an observation tower on top of the office block, and it is anticipated that, as this will be a much better vantage point than the Hertzog Tower observation room, there will be half a million visitors per annum, whereas the Hertzog Tower has 300,000 visitors per year.

I have spoken of the office block. In addition, there will be the shopping centre, which will cover the whole area and be on a number of levels, and there will be a new hotel of 30 storeys in height, which will have 600 double bedrooms. It is anticipated that there will be 900 employees in this hotel, so that, with guests and employees, there could be approximately 2,000 people in that building at one time. It is impossible to predict the number of employees in the shops, or the customers there will be there at any one time during the day, but on this six-acre block there will be, at any one time, approximately 10,000 people.

This project has created immense problems for the city. Take the sewers for instance. It was never anticipated that there would be such a large congregation of people on one site, and the Council has been put to

tremendous expense in providing additional sewerage facilities. It is expected that the site will use some 500,000 gallons of water a day, and over the day it will be necessary to accept a sewer effluent of some 300,000 gallons. However, there are peak hours and valleys, and the Council has had to increase facilities so that at any one time in the peak hours, sewerage effluent at the rate of 875,000 gallons per day can be accepted. This is the type of problem we have had to provide for, which was not anticipated years ago when the mains were laid down.

The total cost of the Carlton Centre will be in the region of R67,000,000, of which R7.9 million was paid for the land. Construction costs will be something like R46,000,000: but what I know will really interest you, is the figure which I have been given for interest, which has to be paid out during the construction period, before income starts - and that is a mere R3.2 million!

In addition to the shopping centre, the office block and the hotel, there is to be a very large exhibition hall, which will occupy 57,000 sq. feet. The speed of the lifts in the various blocks will be from 500 ft. to 1,400 ft. per minute. Electricity - what could the maximum demand be at any one time? This had to be calculated, for in the Electricity Department we have to cater for the peak demand. With all the offices, shops, hotel, air-conditioning plants, etc., the maximum demand for electricity, at any one time, is expected to exceed the peak demand for a city like Kimberley, and all concentrated on this six-acre block.

The problem of rubbish removal is another factor. How is it possible to dispose of all the rubbish accumulated in an office block and shopping centre and hotel of this size? The normal method of rubbish removal is by bin, but how many bins would be required to take off the rubbish from the Carlton Centre, and they would take up valuable space. The Centre will have to install a machine to enable them to compact rubbish. They anticipate that this machine can compact 80 sq. yds. of rubbish into 20 sq. yds., and the Council, with the use of special vehicles with special containers, will remove the compacted rubbish during the night.

### MARKET:

In talking about the changes that are taking place, I must make mention of the Market. The present market was erected in 1913, and with the parking space it occupies some 16 acres. The railway trucks that feed the market use the main West Rand and Soweto railway line, and the Railways advised the Council some years ago that, with the increase in passenger traffic, they could no longer undertake to continue to bring the railway trucks to the market, and that we must find a new site. For a long time the argument raged as to whether marketing was the function of the local authority, or whether it was a national responsibility, but eventually it was decided that we, as a City, should build the new market. The Council acquired a site on the old City Deep Mine, some 243 acres in extent, and plans are already well under way, and a start has been made on the levelling of the site for a market which will now occupy 160 acres when the buildings, sidings, etc., have been laid out. 16 acres originally, and 160 acres now!

One of the difficulties of a Market is that in the summer one has a surplus of produce, and in the winter produce is scarce. In order to even this out, it is planned that the new Market will eventually have 5 acres of refrigerated space and cool chambers, and space for the ripening of fruit, so that in times of plenty the surplus produce can be placed in cold storage and made available in times of scarcity.

That sounds a strong statement. We speak not of how many morgen per animal, but of how many animals per morgen. The sewage effluent is good for agriculture: the solids are good for manure and we have developed these farms on what was very poor agricultural ground. In so far as we can we grow our own fodder. One of the purposes of cattle breeding is to improve the quality of beef on the Johannesburg Market. We have two farms, one to the south and one to the north. The total area of the farms is nearly 7,000 acres, but only a limited portion is used for agricultural purposes. We now talk of four head per morgen, and slaughter animals are sold at approximately 15 months, and at that age they weigh about 800 lbs. Some of you farmers will know if that is good or bad - I don't. The stock used for the cattle breeding schemes are Angus, Hereford, Brown Swiss, Simmentaler, Charolais bulls, with a predominance of Africander, Hereford and Angus blood in the females.

### RE-DEVELOPMENT OF BLIGHTED AREAS:

Some of the oldest established suburbs in Johannesburg are Jeppestown, Fairview and Troyeville, and they are now some 80 years old. In conjunction with the Department of Community Development, development of this area has now been frozen, and no further development can take place without permission of the Department of Community Development. These areas occupy roughly 176 acres, and it is anticipated that the whole of the three areas will be rebuilt. Portion of it will be a Municipal Housing Scheme, but for a portion it is expected that we will want to call in the assistance of private developers, who will have a predetermined plan in general principle of how the development is to take place, and private developers will be asked to take over portions of that ground for development, within the predetermined plan, as they feel will be advantageous. This is an area not far from the city. Its re-development will have the effect of bringing people within easy reach of the centre of the city, and it will be able to house a much larger population than it does today. It will be a good development, with people living under decent conditions.

Some of you may know the areas which we call Vrededorp and Pageview. They have been declared white group areas, although the areas have been occupied by Indians since the early days of Johannesburg. The residential area for Indians is Lenasia, some 18 miles to the south-west of the city. We have, in conjunction with the Department of Community Development, agreed that it would be grossly unfair to move the Indian traders from Vrededorp and Pageview without providing alternative facilities, so it has been agreed to establish a large Indian Bazaar in the vicinity of the Newtown Market. The ground has been expropriated, and the city, in conjunction with the Department of Community Development, is going to build a huge Asiatic Bazaar, which it is hoped will house the traders who will be displaced from the Vrededorp, Pageview and Newclare areas. This is to be a very ambitious scheme, and it will also act as an Urban Renewal Scheme in the Fordsburg area, and there will be a measure of equity for the Indian traders, who would otherwise have lost their trading opportunities.

#### BUSWAYS:

Another great problem in cities is getting the buses moving. They get bogged down in busy periods, and we have embarked on an experiment which we believe is unique, in that we are establishing a route which may only be used by buses. Our most congested area is Hillbrow. We have started this first bus scheme to serve the suburbs to the North/East (including Hillbrow). One of our streets, Joubert Street, is one-way and may only be used by buses, and we have carved a section off one of

our Parks to form a road where buses only may travel. Previously the travelling time taken to get to Hillbrow was 30 minutes, but since the inauguration of the scheme the time has been cut by half, and now a bus, which previously was held up by traffic, by taking this "bus only" road, can do the distance in 15 minutes, and that is proving of great advantage.

We have also introduced buses where there is a driver only, as our difficulty in Johannesburg is that we cannot get white crews for our Transport Department. We know the solution to our transport problem is to have more buses, but we cannot recruit the crews, and that is why we have bus cancellations and cannot provide the service. However, it is hoped that with the new "bus only" road, and with having buses where there is no conductor, the problem will be eased. We have introduced a coupon system whereby, if people purchase coupons, they get a large discount on their fares. This is to encourage the use of coupons, so that when they enter the one-man bus they just have to put the ticket in the machine for cancellation, and the driver is not involved in giving change. So far the system seems to be working very,very successfully.

### NEW CIVIC CENTRE:

Another big change is taking place in Johannesburg. We are establishing a new Civic Centre in Braamfontein, where some 25 acres was acquired some time ago for this purpose. Some of the office blocks are now under construction, but it is something of a long-term project, depending on capital availability. We are also planning for a large number of additional parking garages to take the cars that come into town.

Johannesburg, as with all other cities throughout the world, is finding the financial implications of running a city more and more heavy. For instance, the money borrowed to build its expressways will have to be paid off, and interest will have to be paid on it, with no revenue coming in at all from this expenditure. I think towns throughout South Africa are eagerly awaiting the Government's reaction to the Borckenhagen Committee Report. This Committee was appointed some 11 years ago, and its report is now in the hands of the Government. All cities are wondering what relief will be given to them, when the State studies the recommendations of this Commission.

We also have a difficulty in that our capital expenditure programmes are controlled by the Central Treasury. They advise us of the amount they will allow us to raise by way of loans each year, and this is having a crippling effect on the necessary expansions that have to take place. To give you an indication of one costly undertaking - that of providing for the extension of sewerage works. The extension which will have to take place within the next 7 years will cost R59,000,000. This service is to cater, not only for Johannesburg, but also the surrounding areas from which we accept sewage.

As far as electricity is concerned, the Electrical Engineer told me this morning that 25 of the new projects going up, such as the Carlton Centre, the Standard Bank, the Trust Bank, the 5.A.B.C. Headquarters, will create a peak demand for electricity which equals the total peak demand for electricity in the whole of the city 25 years ago in 1944. Think of this: 25 projects, and the peak demand they will create for electricity is equal to the total peak demand of 25 years ago. Quite staggering, isn't it? These are some of the problems with which we in the city have to grapple.

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Another factor which will have a fundamental influence on the city is the development of the big property promoting companies. They want to develop, not on a stand or two, but on a whole block, and this is going to change the pattern of the city, for the good, I am sure, because the development of blocks gives us these island sites, more room and more street room, and will, in the long-term, be of great benefit to the city.

In giving you these facts - a lot of them may be, and I hope a lot of them will be, meaningful. I have tried not to be boastful, for I do not want to create an impression that Johannesburg is bigger and better -I am just trying to get across the things I know are taking place, the problems they are creating, and the scale on which change is taking place.

Recently we had an exhibition at the Rand Show by our Forward Planning Department. Some five years ago the Council appointed its Chief Town Planner to establish a Forward Planning Section in the City Engineer's Department. His instructions were, not to worry about what is happening today, but to have his eye on what we must do today for what will take place in 10, 15 or 20 years' time. Before the section could really get to grips with the job, a mass of surveys had to be undertaken to provide the basic information. They are now trying to project and plan for what will take place in years to come.

In 1947 I was in the fortunate position of being able to attend a Conference in Toronto - a Conference called by the Municipal Research Bureau of Toronto. Canada was then celebrating its 100th birthday, and Toronto had asked 40 cities, with populations of over 1,000,000, to send six delegates to the Conference, and we discussed the development of metropolitan areas. It was brought home forcibly to us that no city can plan in isolation - that one must plan with one's neighbours - that planning must be a joint effort, and that one must try and co-ordinate the developments in various areas. This is one of the things that is so necessary in South Africa - to plan, not in isolation, but on a regional basis. Where metropolitan facilities are avilable, the local authorities should get together. The tendency overseas is to form regional planning authorities and for city units to become larger and larger.

We in Johannesburg feel the great need for planning, not only for ourselves, but for the areas surrounding Johannesburg to plan in conjunction with us, so that we can take a far-sighted view. At our recent Forward Planning exhibition at the Rand Show, one of the walls carried a quotation from a Town Planner as follows:-

### "A PLANNER'S PHILOSOPHY

"Make no little plans. They have no magic to stir men's blood, And probably themselves will not be realised. Make big plans. Aim high, in hope and work, Remembering that a noble, logical diagram, Once recorded, will never die But long after we are gone will be a living thing

Asserting itself with ever-growing insistency.

> Remember that our sons and grandsons Are going to do things that will stagger us, And let your watchword be Order and your beacon Beauty."

I would like to leave this thought with you, that we must plan on a big scale, we must be imaginative, and we must try to plan for our sons and grandsons.

I now have great pleasure in declaring this Conference open.

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# THE ASSOCIATION OF TRUST COMPANIES IN SOUTH AFRICA Conference - 1969 - Johannesburg

# DIE ASSOSIASIE VAN TRUSTMAATSKAPPYE IN SUID-AFRIKA Konferensie - 1969 - Johannesburg

OPENING ADDRESS BY HIS WORSHIP THE MAYOR OF JOHANNESBURG, COUNCILLOR PATRICK LEWIS

OPENINGSREDE DEUR SY EDELAGBARE DIE BURGEMEESTER VAN JOHANNESBURG, RAADSLID PATRICK LEWIS

When I was approached to open this Conference, it was suggested that I give the opening address, and I thought it might be fitting if I talked on CHANGING JOHANNESBURG - on some of the changes that are taking place today, changes which some of us in Johannesburg may be aware of, but of which we have not realised the full significance. I think for people from outside Johannesburg some of the changes may be of interest.

## AREA AND DEVELOPMENT OF MINING GROUND:

Johannesburg, until recently, covered an area of 94.48 sq. miles, but a short time ago additions were made totalling an area of 15 sq. miles. Of the 94.48 sq. miles, however, some 23 sq. miles was proclaimed mining ground, and was, therefore, not available for development purposes. The mines which originally occupied that ground are now coming to the end of their lives, and the development of this ground for other purposes is now being considered.

Johannesburg's development has been lopsided. The business area has largely been built immediately north of the proclaimed mining area. The residential development is mainly to the north and east, with limited development to the south of the mining area. Now that the mining ground is to become available for other purposes it is going to knit the centre to the south by the use of the ground, and on one mine alone, namely, part of Crown Mines, it is anticipated that it will be possible to house residentially, a population equal to that of the town of Springs, some 40,000 to 45,000 people. In addition to this, a Commission of Inquiry was appointed some time ago to consider the incorporation into Johannesburg of an area to the south. The findings of the Commission are not yet known, but the case put forward by the Johannesburg Council is that an area of some 130 sq. miles (of which Soweto is 25 sq. miles) should be incorporated. If this is done, the imbalance of the city will be rectified, and we will then have development to the south comparable to that which has taken place to the north.

#### RECREATIONAL AREA:

A short time ago quite an imaginative scheme was passed by the Council, namely, to acquire ground on what we hope will be our southern boundary, that is, the Klip River. A large portion of this ground is already owned by the City Council and, by building a wall at the eastern boundary of the ground, it is hoped to be able to create a lake covering some 200 acres, which will provide a recreational region for the people

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of Johannesburg. In addition, as was reported in the Press this week, the Minister of Planning has agreed to a scheme to reserve as a recreational area, some 18,000 morgen at a place called Suikerbosrand, which starts near Heidelberg and continues along a range of hills in a westerly direction towards Johannesburg, and it is hoped to make this an open recreational area for the population of the Reef. The length of this area is approximately 11 miles and, at places, is 5 miles wide.

Various Municipalities on the Reef have had preliminary discussions, and have agreed that they will make a contribution to the capital cost and to the financing of such a scheme, to give the people of the Witwatersrand a recreational area very near to where they live. These changes are taking place, and are going to make a vast difference to the face of Johannesburg.

## POPULATION EXPLOSION:

I would like to quote a few figures of the anticipated population explosion in Johannesburg, to give you an idea of the number of people for whom we will have to plan. In 1920 the population of Johannesburg of all races was 286,000. In 18 years it increased to half a million. In 1967 it was 1,300,000 and - by 1985 - that is in 16 years time, it is anticipated that the population will be 2,000,000. That is the human population.

#### VEHICLE POPULATION:

Now I would like to deal with the motor car population. In 1948 it was 71,000. Twelve years later, in 1960, it had doubled to 158,000. In the next 8 years there were another 100,000 cars, and by 1985 it is anticipated that there will be 400,000 vehicles on the roads. We will have more people; we will have more cars, but the street areas remain the same.

# FREEWAYS AND EXPRESSWAYS:

Johannesburg has embarked on a very large "freeways" system - portion of this is already in use and the remainder of the system should be open within the next two years. This project is to cost R64,000,000. I know unfavourable comparisons have been made between the road system of Johannesburg and that of Cape Town, and I want to congratulate Cape Town on what they have done. However, they have had to deal with a more sympathetic Provincial Council, which agreed to assist them some 4 or 5 years before the Transvaal Province agreed to assist Johannesburg. In addition, the contribution was at a higher percentage of the total cost, and in the total cost Cape Town was allowed to include the cost of the land, whereas in Johannesburg we have had to exclude in our claim for contribution any costs in connection with the acquisition of land.

When we commenced the expressway system, we were thought to be very lucky in that we could take some of the expressways over old mining ground, but what a snare and a delusion that was, because a lot of this mining ground was mined in the very early days of Johannesburg. There are no diagrams now of the underground workings, and the weight of the expressways is so high that the Council has been involved in considerable expense in shoreing up the old mine workings before it was possible to build. In some cases it has been necessary to sink supports 150 feet before reaching solid ground. Another interesting fact is that into the pillars supporting the roads the engineers built "jacks" - similar to a motor-car jack, but on a very much bigger scale - so that, if subsequently there is subsidence, the pillars can be adjusted to height, and this has been a very,

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very costly part of the roadway scheme. I think I said the total cost will be something like R64,000,000, of which we are receiving a contribution from the Province and the National Transport Commission of only R21,000,000, which was calculated on the original cost of R45.5 million. When the costs were subsequently increased, we were advised that the cost to be borne by the Government authorities would have to be based on the original estimate of cost.

# AIR TRAVEL:

Another means of travel that is changing Johannesburg is the use of light aircraft. We have an airport - the Rand Airport - and I would like to give you some figures regarding the number of take-offs and landings. Just going back to 1962, the total for that year was 28,000 takeoffs and landings. By 1965 the number had increased to 80,000, and last year, for the first time, we topped the 100,000 number of planes alighting and taking off. That compares with something like 27,000 from Jan Smuts Airport.

Jan Smuts Airport is now not just a terminal airport - it used to be the end of the run from overseas, but with the opening of the airways to Australia and to South America, Jan Smuts Airport is becoming a "through" airport. Tremendous numbers of businessmen who wish to visit Australia, come to South Africa first, and then go on. Also, people in Africa who want to get to South America will now come south instead of going north. The number of passengers carried on S.A. Airways, a great number of whom start from Jan Smuts Airport, has increased fourfold in the last ten years, and the number of passengers carried last year was close on the l million mark.

## BUILDING:

When thinking of the changes taking place in Johannesburg, one realises that a totally different form of building is being erected great tower blocks are going up, and there is a reason for this. Until a few years ago, we had Town Planning regulations which zoned the various areas of the city into height and use zones. There was another governing factor, and that was that the height of a building could not exceed a line drawn at a 59° angle from the other side of the street, so that the width of the street was a determining factor as to how high one could build and, as a result, most of our buildings were fairly squat. However, some years ago that regulation was changed, and the 59° factor was altered. In order to get people to set their buildings back from the immediate street boundary, it was agreed that if the building was set back by 5 feet, the ground floor area sacrificed could be built at a higher level. Naturally, as more rental is paid for ground floor space in a shopping area than for space on a higher level, it is necessary to be compensated to a greater extent for the square footage lost on the ground, thus, in certain areas, if a developer sacrifices one square foot on the ground, he can, in certain areas, build 6 sq. feet on an upper floor. Developers are encouraged to set back their buildings by a minimum of 5 feet with a maximum of 10 in order to get this bonus bulk on upper floors. The more the buildings are set back from the street the higher the buildings can be built. There is also the wish to encourage developers to build residential accommodation in the centre of the city, and here again, if residential accommodation is built instead of office accommodation; in an area zoned for offices, the developer can get additional bulk bonus. This has had a fundamental effect on the type of building that is being erected today. If you examine many of the buildings under construction, you will find they are prestige blocks

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where the ground floor area contains fountains and gardens, with the result that there is more air and light around the buildings. The whole pattern is changing.

# CARLTON CENTRE:

I want to deal in some detail with just one project - the Carlton Centre - to show you what is happening. On an average, between the Carlton Centre, the new Standard Bank building and the Trust Bank building, only 35% of the ground floor area will be occupied by the buildings. The remainder will be open space, so you will realise what an effect this is having on opening up our city.

Let me speak about the Carlton Centre for a few minutes. The Centre is being erected on what previously was four city blocks, the intervening streets having been closed, and the site will actually occupy six. acres. This has meant a change in the services which previously went through those streets. The basements of the Centre go down a total of 95 feet. When it was decided to launch this project, the owners realised there might be claims from the surrounding owners, because owing to the excavations, the foundations of their buildings might be affected, so that, before a square yard of earth was removed from the site, the owners called in a firm of architects, and they surveyed all the buildings in the immediate vicinity. . They photographed the cracks, they recorded the cracks so that they could get a factual position of the state of the buildings in the surrounding area before commencing their excavations. This was an extremely costly precaution, but they wanted to avoid claims being lodged against them for which they were not really responsible. Now, when you dig a hole of 95 ft., you draw off the water from the surrounding area, and this will affect the soil texture of that earth, because with this drainage taking place the Carlton Centre, naturally, will have to pump out the water that results from the digging of this huge hole.

On the Carlton Centre site they are building a huge office block, 50 storeys in height. Many of you know the Hertzog Tower - but the highest point of the Carlton office block will be higher than the Hertzog Tower quite staggering, isn't it? Higher than the Hertzog Tower, although it starts from a lower street level site. The Carlton Centre will have provision for the parking of 2,000 cars: the office area will be over 1,000,000 sq. feet, and it is anticipated that the employees in the office block will number between 6,000 and 7,000 persons. There is to be an observation tower on top of the office block, and it is anticipated that, as this will be a much better vantage point than the Hertzog Tower observation room, there will be half a million visitors per annum, whereas the Hertzog Tower has 300,000 visitors per year.

I have spoken of the office block. In addition, there will be the shopping centre, which will cover the whole area and be on a number of levels, and there will be a new hotel of 30 storeys in height, which will have 600 double bedrooms. It is anticipated that there will be 900 employees in this hotel, so that, with guests and employees, there could be approximately 2,000 people in that building at one time. It is impossible to predict the number of employees in the shops, or the customers there will be there at any one time during the day, but on this six-acre block there will be, at any one time, approximately 10,000 people.

This project has created immense problems for the city. Take the sewers for instance. It was never anticipated that there would be such a large congregation of people on one site, and the Council has been put to

tremendous expense in providing additional sewerage facilities. It is expected that the site will use some 500,000 gallons of water a day, and over the day it will be necessary to accept a sewer effluent of some 300,000 gallons. However, there are peak hours and valleys, and the Council has had to increase facilities so that at any one time in the peak hours, sewerage effluent at the rate of 875,000 gallons per day can be accepted. This is the type of problem we have had to provide for, which was not anticipated years ago when the mains were laid down.

The total cost of the Carlton Centre will be in the region of R67,000,000, of which R7.9 million was paid for the land. Construction costs will be something like R46,000,000: but what I know will really interest you, is the figure which I have been given for interest, which has to be paid out during the construction period, before income starts - and that is a mere R3.2 million!

In addition to the shopping centre, the office block and the hotel, there is to be a very large exhibition hall, which will occupy 57,000 sq. feet. The speed of the lifts in the various blocks will be from 500 ft. to 1,400 ft. per minute. Electricity - what could the maximum demand be at any one time? This had to be calculated, for in the Electricity Department we have to cater for the peak demand. With all the offices, shops, hotel, air-conditioning plants, etc., the maximum demand for electricity, at any one time, is expected to exceed the peak demand for a city like Kimberley, and all concentrated on this six-acre block.

The problem of rubbish removal is another factor. How is it possible to dispose of all the rubbish accumulated in an office block and shopping centre and hotel of this size? The normal method of rubbish removal is by bin, but how many bins would be required to take off the rubbish from the Carlton Centre, and they would take up valuable space. The Centre will have to install a machine to enable them to compact rubbish. They anticipate that this machine can compact 80 sq. yds. of rubbish into 20 sq. yds., and the Council, with the use of special vehicles with special containers, will remove the compacted rubbish during the night.

#### MARKET:

In talking about the changes that are taking place, I must make mention of the Market. The present market was erected in 1913, and with the parking space it occupies some 16 acres. The railway trucks that feed the market use the main West Rand and Soweto railway line, and the Railways advised the Council some years ago that, with the increase in passenger traffic, they could no longer undertake to continue to bring the railway trucks to the market, and that we must find a new site. For a long time the argument raged as to whether marketing was the function of the local authority, or whether it was a national responsibility, but eventually it was decided that we, as a City, should build the new market. The Council acquired a site on the old City Deep Mine, some 243 acres in extent, and plans are already well under way, and a start has been made on the levelling of the site for a market which will now occupy 160 acres when the buildings, sidings, etc., have been laid out. 16 acres originally, and 160 acres now!

One of the difficulties of a Market is that in the summer one has a surplus of produce, and in the winter produce is scarce. In order to even this out, it is planned that the new Market will eventually have 5 acres of refrigerated space and cool chambers, and space for the ripening of fruit, so that in times of plenty the surplus produce can be placed in cold storage and made available in times of scarcity.

A fundamental change has taken place in the method of marketing. Some years ago producers consigned their goods to the Market Master: it was then sorted into commodities, and municipal auctioneers offered the goods for sale. The City sent a mission overseas to study markets throughout the Western world, and it was found that today the auctioneer system is regarded as hopelessly out of date, and it has been decided to change. Now the producer consigns his goods to a Market Agent, and that Market Agent then negotiates the sale. This is how we will operate in the new Market. There will be 9 halls, 8 of which will be 1,000 feet long by 80 feet wide, and one 1,500 feet by 100 feet, and it is planned that at any one time it will be possible to offload some 300 railway trucks. Provision is also being made for a wholesale flower market. A 13-acre site is being reserved in the new Market, and Multiflora will be establishing its headquarters there.

## INDIAN MARKET:

In Johannesburg for years we have had a separate Indian Market from our normal produce market, but it is now intended to incorporate the Indian Market in the new Market area.

People from the country may not know that the Johannesburg Produce Market is the central market which serves a tremendously wide area. Produce is consigned here, bought by wholesalers, and then transferred all over the Transvaal and into the Free State. The new Market is going to be very different from the old, and on a very much bigger scale, It is felt that, with the change in marketing methods that is taking place, the refrigeration area is very, very essential, and will have the effect of helping the producer, in that prices will be more evenly maintained throughout the year.

As I have already said, the Railways informed us that we had to make a move, but when it came to the point of moving the Market, the Council has to meet the cost of building the railway line, although the Railways will get all the revenue from the produce carried. We have to pay the bill for marshalling yards, and for the line to the Market, and that will cost us R1,000,000, of the total R8,000,000 which will have to be spent on the Market. In addition, it is necessary for us to plan a new Abattoir, which will be adjacent to the new Produce Market, and will occupy some 230 acres. It is anticipated that this will cost around R14,000,000.

## SEWERAGE SERVICES:

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For some years Johannesburg has provided a metropolitan sewerage service. Johannesburg built large works, and has accepted the flow from surrounding areas rather than have a number of small works. Some of the areas to the north of Johannesburg have grown at a phenomenal and unanticipated rate, and when we laid down our sewerage mains, the areas to the north anticipated that the flow we would have to accept by 1985 would be 5,000,000 gallons per day. By 1960 they revised their estimate - after we had built the pipes from 5,000,000 to 8,000,000 being the anticipated flow by 1985, but it is already 6.7 million, and this is creating great problems for us because the quantity of water used in sewers doubles every 11 years, so that at our sewerage farms we have this mass of water. What do you do with water that has come from sewers? Before it can be put back in a stream it must be purified according to standards laid down under the Water Act. The Council is faced with this problem - to install very costly machinery to purify the water, or to try and use it. We have tried to use it. . Portion of the water is used in our cooling towers at our Power Stations at Kelvin, but we have also developed the most intensive cattle breeding scheme in the Republic.

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That sounds a strong statement. We speak not of how many morgen per animal, but of how many animals per morgen. The sewage effluent is good for agriculture: the solids are good for manure and we have developed these farms on what was very poor agricultural ground. In so far as we can we grow our own fodder. One of the purposes of cattle breeding is to improve the quality of beef on the Johannesburg Market. We have two farms, one to the south and one to the north. The total area of the farms is nearly 7,000 acres, but only a limited portion is used for agricultural purposes. We now talk of four head per morgen, and slaughter animals are sold at approximately 15 months, and at that age they weigh about 800 lbs. Some of you farmers will know if that is good or bad - I don't. The stock used for the cattle breeding schemes are Angus, Hereford, Brown Swiss, Simmentaler, Charolais bulls, with a predominance of Africander, Hereford and Angus blood in the females.

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Some of the oldest established suburbs in Johannesburg are Jeppestown, Fairview and Troyeville, and they are now some 80 years old. In conjunction with the Department of Community Development, development of this area has now been frozen, and no further development can take place without permission of the Department of Community Development. These areas occupy roughly 176 acres, and it is anticipated that the whole of the three areas will be rebuilt. Portion of it will be a Municipal Housing Scheme, but for a portion it is expected that we will want to call in the assistance of private developers, who will have a predetermined plan in general principle of how the development is to take place, and private developers will be asked to take over portions of that ground for development, within the predetermined plan, as they feel will be advantageous. This is an area not far from the city. Its re-development will have the effect of bringing people within easy reach of the centre of the city, and it will be able to house a much larger population than it does today. It will be a good development, with people living under decent conditions.

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# BUSWAYS:

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We have also introduced buses where there is a driver only, as our difficulty in Johannesburg is that we cannot get white crews for our Transport Department. We know the solution to our transport problem is to have more buses, but we cannot recruit the crews, and that is why we have bus cancellations and cannot provide the service. However, it is hoped that with the new "bus only" road, and with having buses where there is no conductor, the problem will be eased. We have introduced a coupon system whereby, if people purchase coupons, they get a large discount on their fares. This is to encourage the use of coupons, so that when they enter the one-man bus they just have to put the ticket in the machine for cancellation, and the driver is not involved in giving change. So far the system seems to be working very, very successfully.

## NEW CIVIC CENTRE:

Another big change is taking place in Johannesburg. We are establishing a new Civic Centre in Braamfontein, where some 25 acres was acquired some time ago for this purpose. Some of the office blocks are now under construction, but it is something of a long-term project, depending on capital availability. We are also planning for a large number of additional parking garages to take the cars that come into town.

Johannesburg, as with all other cities throughout the world, is finding the financial implications of running a city more and more heavy. For instance, the money borrowed to build its expressways will have to be paid off, and interest will have to be paid on it, with no revenue coming in at all from this expenditure. I think towns throughout South Africa are eagerly awaiting the Government's reaction to the Borckenhagen Committee Report. This Committee was appointed some 11 years ago, and its report is now in the hands of the Government. All cities are wondering what relief will be given to them, when the State studies the recommendations of this Commission.

We also have a difficulty in that our capital expenditure programmes . are controlled by the Central Treasury. They advise us of the amount they will allow us to raise by way of loans each year, and this is having a crippling effect on the necessary expansions that have to take place. To give you an indication of one costly undertaking - that of providing for the extension of sewerage works. The extension which will have to take place within the next 7 years will cost R59,000,000. This service is to cater, not only for Johannesburg, but also the surrounding areas from which we accept sewage.

As far as electricity is concerned, the Electrical Engineer told me this morning that 25 of the new projects going up, such as the Carlton Centre, the Standard Bank, the Trust Bank, the S.A.B.C. Headquarters, will create a peak demand for electricity which equals the total peak demand for electricity in the whole of the city 25 years ago in 1944. Think of this: 25 projects, and the peak demand they will create for electricity is equal to the total peak demand of 25 years ago. Quite staggering, isn't it? These are some of the problems with which we in the city have to grapple.

/9. Another .....

Another factor which will have a fundamental influence on the city is the development of the big property promoting companies. They want to develop, not on a stand or two, but on a whole block, and this is going to change the pattern of the city, for the good, I am sure, because the development of blocks gives us these island sites, more room and more street room, and will, in the long-term, be of great benefit to the city.

In giving you these facts - a lot of them may be, and I hope a lot of them will be, meaningful. I have tried not to be boastful, for I do not want to create an impression that Johannesburg is bigger and better -I am just trying to get across the things I know are taking place, the problems they are creating, and the scale on which change is taking place.

Recently we had an exhibition at the Rand Show by our Forward Planning Department. Some five years ago the Council appointed its Chief Town Planner to establish a Forward Planning Section in the City Engineer's Department. His instructions were, not to worry about what is happening today, but to have his eye on what we must do today for what will take place in 10, 15 or 20 years' time. Before the section could really get to grips with the job, a mass of surveys had to be undertaken to provide the basic information. They are now trying to project and plan for what will take place in years to come.

In 1947 I was in the fortunate position of being able to attend a Conference in Toronto - a Conference called by the Municipal Research Bureau of Toronto. Canada was then celebrating its 100th birthday, and Toronto had asked 40 cities, with populations of over 1,000,000, to send six delegates to the Conference, and we discussed the development of metropolitan areas. It was brought home forcibly to us that no city can plan in isolation - that one must plan with one's neighbours - that planning must be a joint effort, and that one must try and co-ordinate the developments in various areas. This is one of the things that is so necessary in South Africa - to plan, not in isolation, but on a regional basis. Where metropolitan facilities are avilable, the local authorities should get together. The tendency overseas is to form regional planning authorities and for city units to become larger and larger.

We in Johannesburg feel the great need for planning, not only for ourselves, but for the areas surrounding Johannesburg to plan in conjunction with us, so that we can take a far-sighted view. At our recent Forward Planning exhibition at the Rand Show, one of the walls carried a quotation from a Town Planner as follows:-

## "A PLANNER'S PHILOSOPHY

"Make no little plans. They have no magic to stir men's blood, And probably themselves will not be realised. Make big plans. Aim high, in hope and work, Remembering that a noble, logical diagram,

Once recorded, will never die But long after we are gone will be a living thing Asserting itself with ever-growing insistency.

> Remember that our sons and grandsons Are going to do things that will stagger us, And let your watchword be Order and your beacon Beauty."

I would like to leave this thought with you, that we must plan on a big scale, we must be imaginative, and we must try to plan for our sons and grandsons.

I now have great pleasure in declaring this Conference open.

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