

PRESENTATION OUTLINE
FOR
MACGREGOR TRAPEZOIDAL CONCRETE CHANNEL

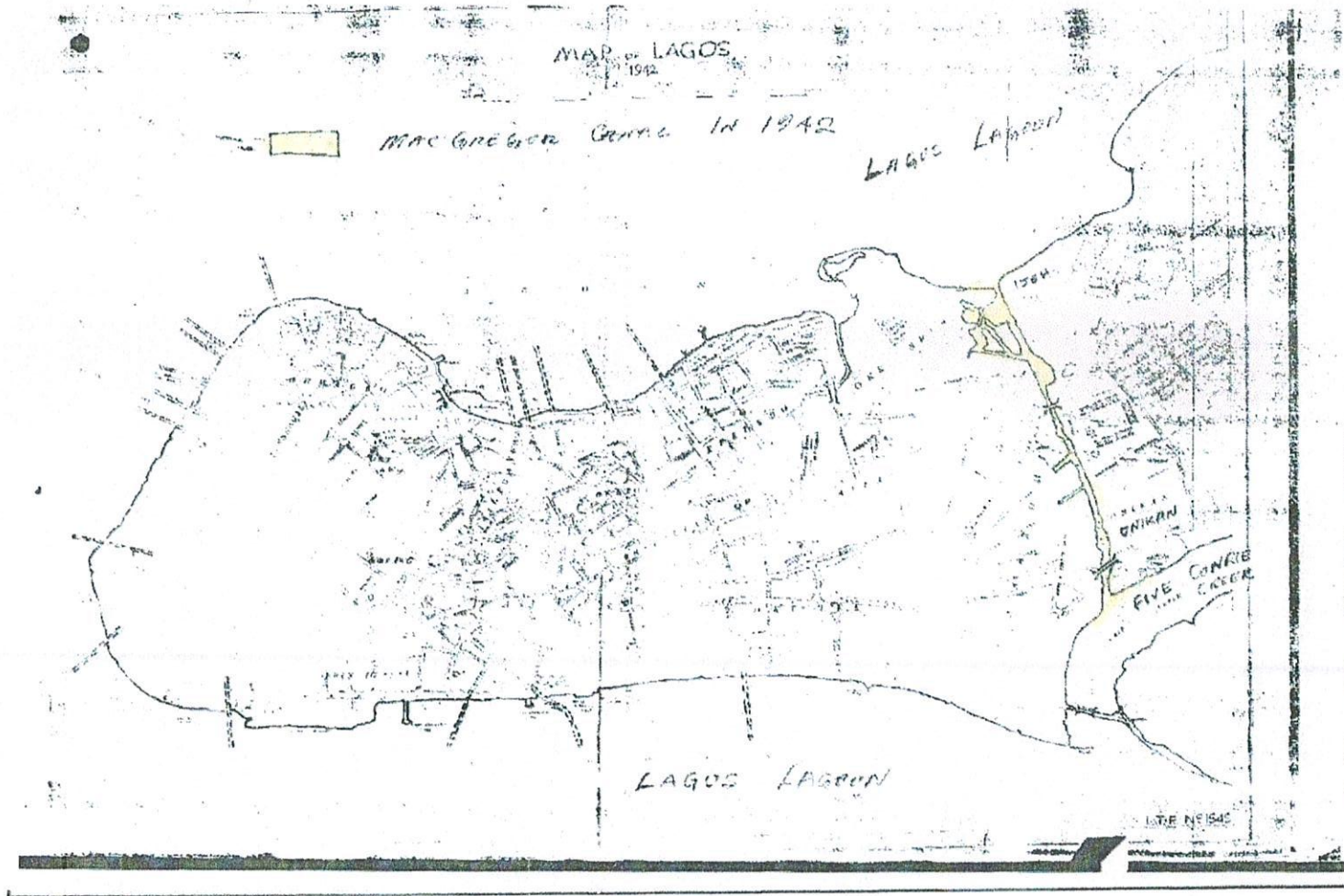
- Project Overview
- Project Objectives
- Project Characteristic
- Project Scope
- Challenges at Site
- Project benefits

PROJECT OVERVIEW

- The project site represents the oligocene/primordial alluvial plains and flood basin within central Lagos metropolis of the Lagos Island / Ikoyi Obalende Local Government. The site is bounded in the East by the Lagos Lagoon, Five cowries creek in the West and Built – up development in the North and Southern directions.
- The **topography** of the project site can be described as a generally flat terrain at about 1.5m above sea level. The grounds of the Northern and Eastern directions has experienced serious modifications of sand filling and reclamation in recent times.

- Visual inspection and observation indicate that the **Soil** within the site is composed of recent deposits of silts, organic clay and peats.
- From observation within scattered points within the project area, the **ground water table** can be seen at depth of between 0.45 – 0.60m from the Ground level.

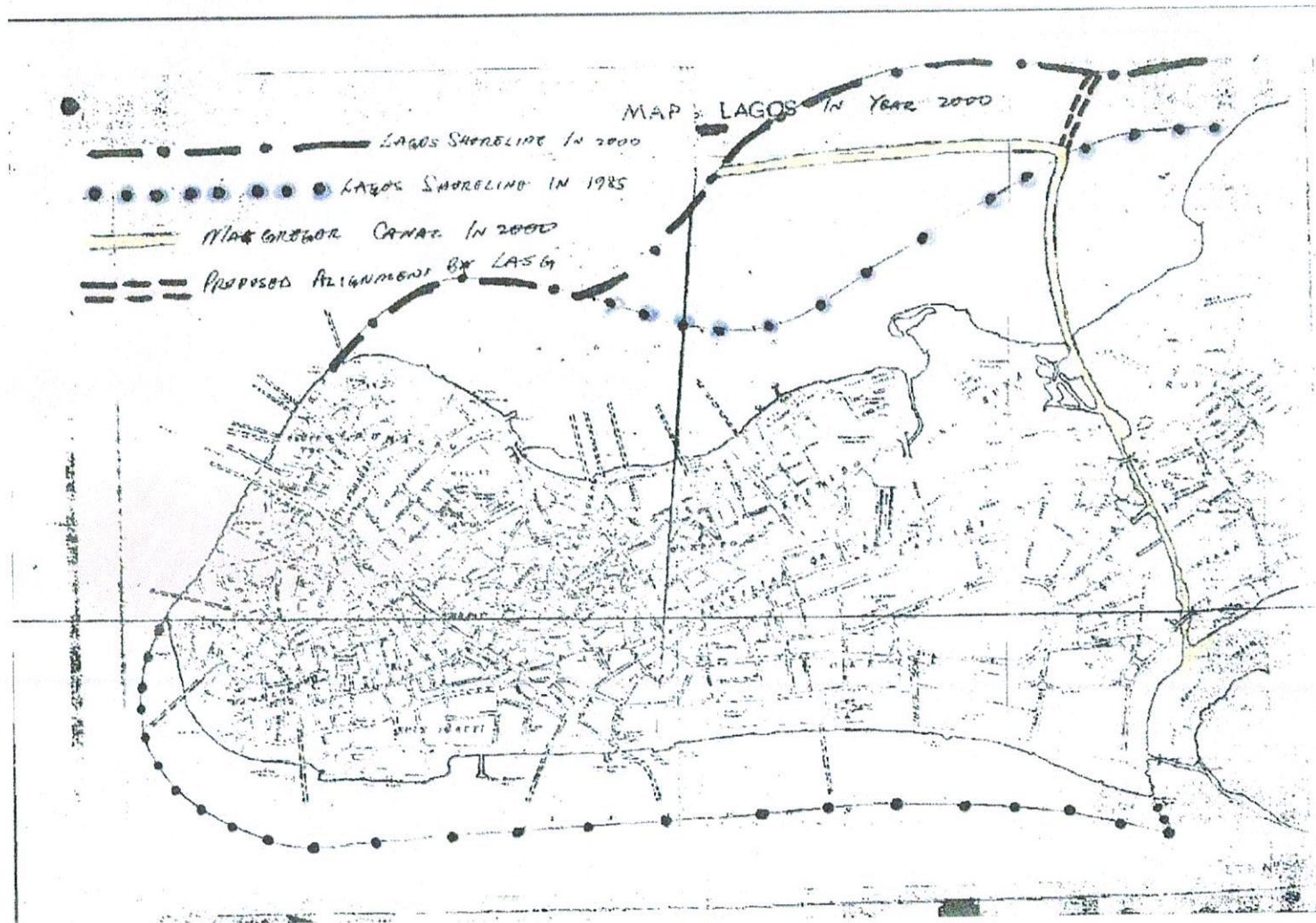
MAP OF LAGOS MACGREGOR CHANNEL IN 1942



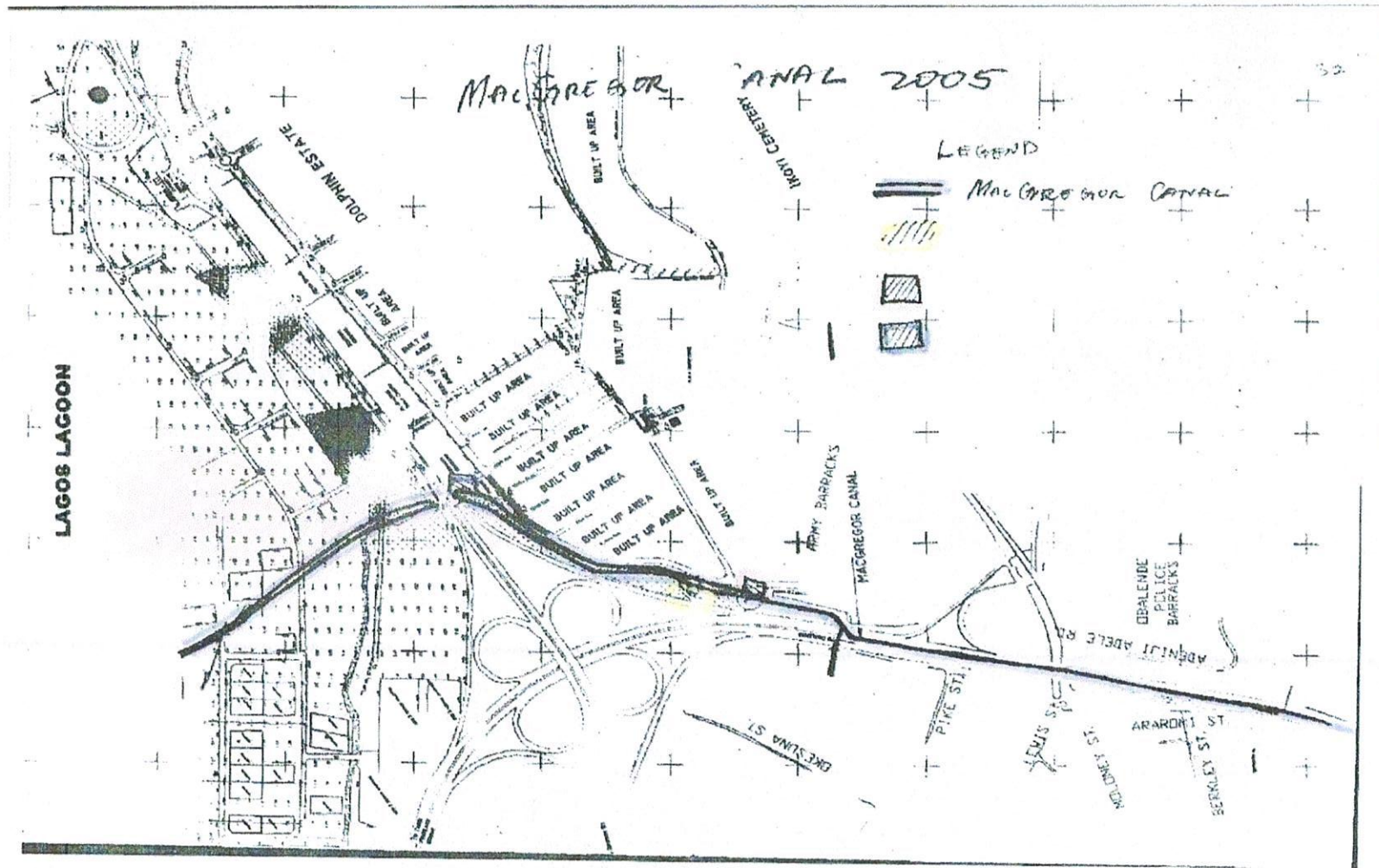
MACGREGOR CHANNEL IN 1985



MACGREGOR CHANNEL IN 2000



MACGREGOR CHANNEL IN 2005



- The MacCregor canal as at 1942 was a tidal channel that used to separate the old Ikoyi Island from Lagos Island and used to flow from five cowries creek at Onikan to Lagos Lagoon at Ijeh and vice versa according to the dictates of the tide and now discharges a catchment area of 76.5Ha.
- The channel served as an attenuating buffer channel that assisted in mitigating against the high wave energy of the ocean surge and spring tides.
- It also served as a natural channel that was used for fishing, recreation and water navigation and transportation.
- Continuous urbanisation, extensive land reclamation, encroachment and shoreline modifications have impaired the natural functions of the canal resulting in severe flooding, stagnation and degradation of the canal.
- This has encouraged refuse dumping, illegal structures and contravention of right – of – way.

•The consequences of the foregoing have impacted negatively within the catchment area causing the following:

- Severe flooding of Obalende, Ijeh, parts of Dolphin Estate, Osborne estate
- High water table
- Low soil bearing strength
- Serviceability limit state failure of buildings and their foundations
- Frequent road damages
- Underground / surface water pollution
- Unsanitary and unsightly environment

PROJECT OBJECTIVE

- To deflood sections of
 - Obalende
 - Dolphin Estate
 - Osborne Estate
 - Lagos Island
 - Ijeh
 - SSS/ Police barracks

- To discourage indiscriminate dumping of refuse in the channel
- To discourage encroachment of channel Right of way
- To restore the quality of the environment
- Reduce road spoilage
- Lower water table
- Increase soil bearing capacity
- Reduce the serviceability limit state failure of Infrastructures and physical development
- Restore the channel to assist in mitigating high wave energy.

PROJECT

CHARACTERISTICS

- Construction of concrete-lined trapezoidal sections
- Cleaning of the sheet pile sections (1185m)
- Cleaning of primary / secondary collectors within the Dolphin estate, SSS and Ijeh Barracks
- Dredging of Osborne road channel
- Raising of drains wall / capacity building of Ijeh / SSS police barracks

- planting of trees and grasses
- Construction of chain link fence
- Construction of blockwall fence
- Making good of the project environment

CHALLENGES AT SITE

- Severe encroachment and cannibalization of the right-of-way of the channel
- Tidal levels.
- Strength of the subsoil along channel alignment
- Indiscriminate dumping of refuse in the channel
- The need for separation of all illegal structures from right-of-way of the channel.

PROJECT SCOPE

- **Trapezoidal concrete channel**

- Length = 1,050m
- Depth = 1.5m
- Bottom width = 5m
- Top width = 15m

- **Cleaning of sheet pile section**

- Length = 1,185m
- Depth = 1.8m
- Width = 8m

- **Dredging of Osborne road channel**

- Length = 600m
- Depth = 1.5m
- Bottom width = 3.00m
- Top width = 6.00m

- **Raising of drain wall inside Ijeh barracks**

- Length = 300m
- wall height = 0.3m

- **Maintenance cleaning of all collectors drains within dolphin, sss and Ijeh barracks**

- Length = 5000m
- width = 1.2m
- depth = 1.2m

PROJECT BENEFITS

- **Lowering of the water table within the catchment area**
- **Improvement of the soil strength within the catchment area**
- **Capital appreciation in value of Real Estate lands**
- **Increase durability of road infrastructures and dwelling due to flimination of flooding problem**
- **Increase in socio – Economic industrial and commercial activities due to reduction / elimination of flood**
- **Provision of both permanent and temporary employment**



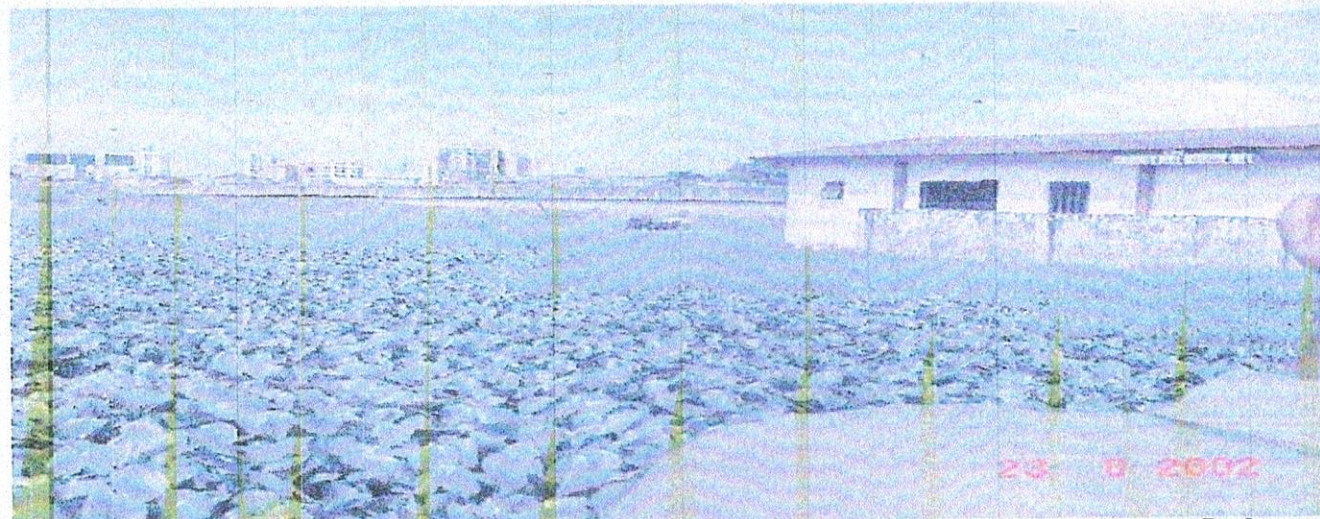
The Dispensational Gospel Church building with culvert built across the McGregor Canal and impeding flow of channel



The Dispensational Gospel Church built on the Macgregor Canal Alignment



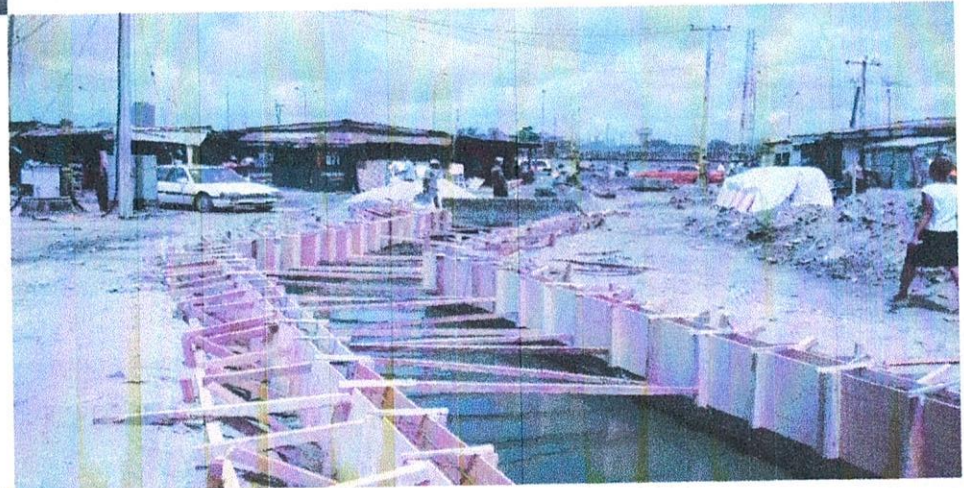
A view of the The Dispensational Gospel Church with Ijeh/Dolphin Housing scheme in background



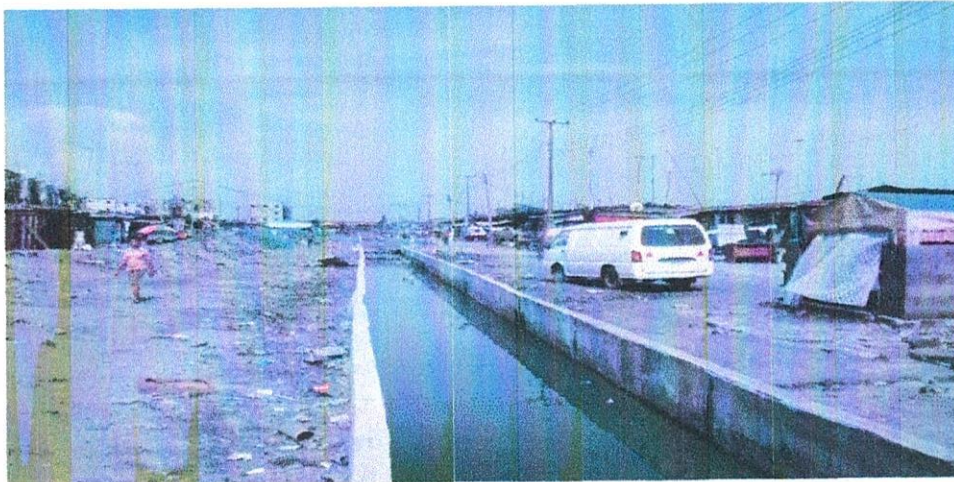
The Dispensational Gospel Church lying close to the Obalende-to-Osborne deck-on-pile which is a federal highway



BEFORE



DURING



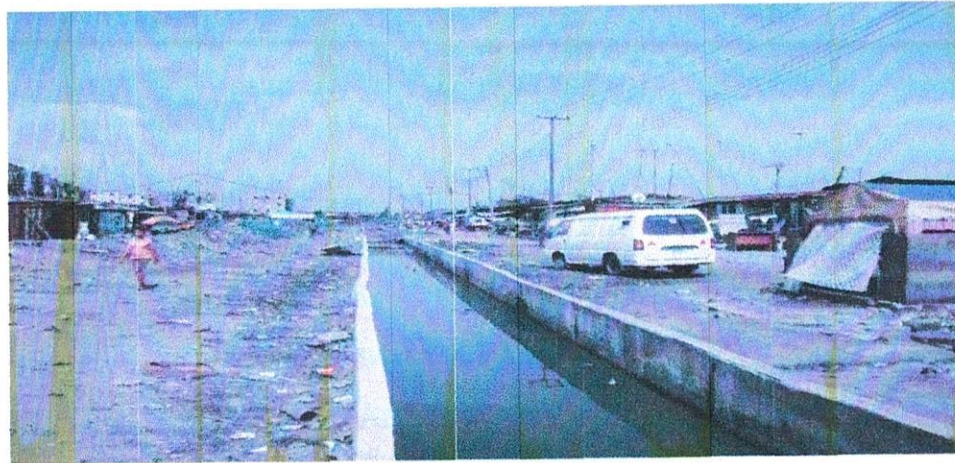
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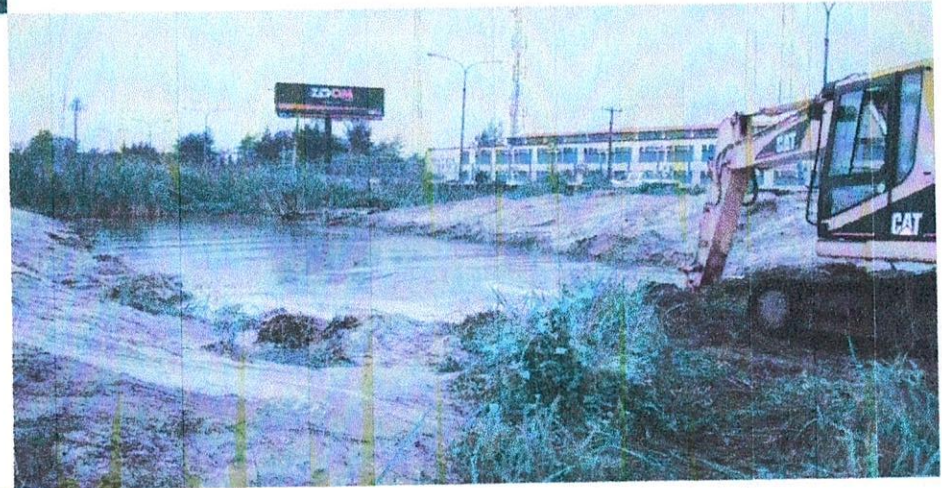


AFTER



BEFORE

DURING



AFTER





BEFORE



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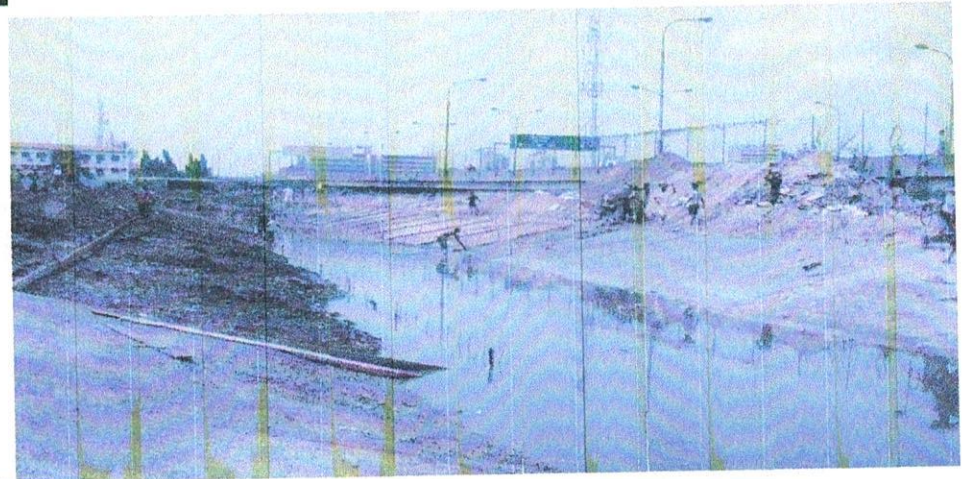
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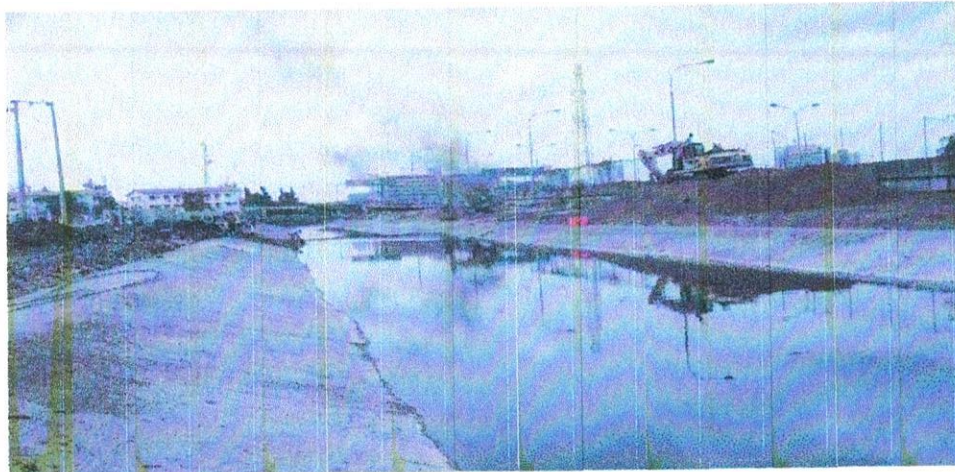
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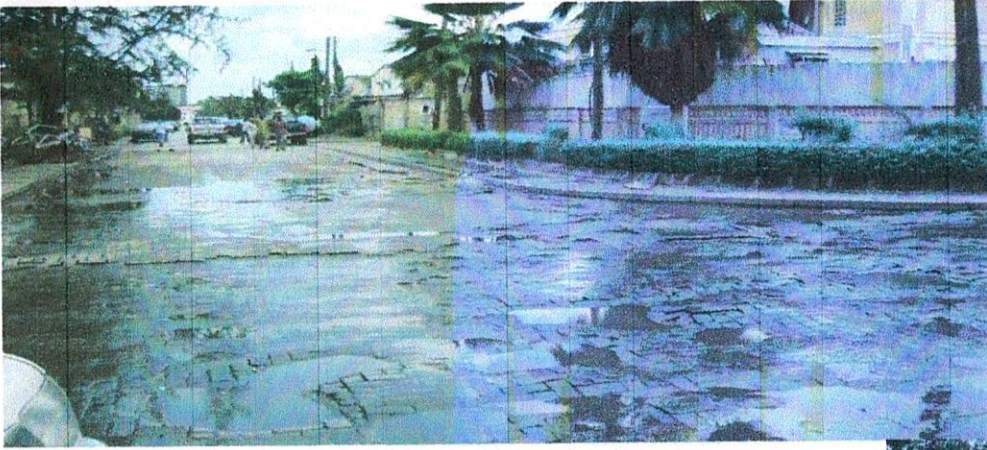
BEFORE



DURING



AFTER



BEFORE

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AFTER



Thank You