

**R A N K I N**  
**ENGINEERING CONSULTANTS**

[WWW.RANKINENGINEERING.COM](http://WWW.RANKINENGINEERING.COM)

**Rankin Engineering Consultants Ltd is an independent Zambian - owned ISO 9001:2015 certified Consulting Firm. Based in Lusaka, we provide technical services within Zambia and other regions of Africa in all the major engineering disciplines.**



+ 260 (211) 290085  
info@rankinengineering.com  
Rankin House, Chozi Road, Northmead,  
Lusaka, P.O.BOX 50566 Zambia

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# Welcome To RANKIN ENGINEERING

## Market Leader In Engineering Solutions

Rankin was established in 1989 as an independently owned Consulting firm, built around a core of internationally qualified engineers with wide ranging skills and experience. This core group has been complemented by a cohort of locally and regionally trained engineers, providing a diverse multi-disciplinary staff base. Rankin's pursuit of excellence in tackling complex engineering challenges has earned it a reputation as one of the leading Consulting firms in the region. Rankin is the first ISO 9001:2015 certified engineering consulting firm in Zambia.



## OUR AIM

Our aim has been to build a reputation of excellence through a dynamic and competent work force respected for its skills, integrity, innovation, openness, cost-effectiveness, teamwork and technical expertise.

## QUALITY

Rankin Engineering Consultants is committed to ensuring accurate, cost-effective, appropriate and responsive multi-disciplinary consulting engineering services in order to continuously meet or exceed the expectations of our customers. We are committed to building and maintaining a reputation of excellence through a dynamic and competent work force, respected for its skills, integrity and innovation. Rankin Engineering Consultants adheres to all regulatory and statutory requirements in its business operations. Our implemented Quality Management System complies with the requirements of **ISO 9001:2015**. The top management of Rankin Engineering Consultants is committed to the continual improvement of the quality management system.

Our fully equipped materials laboratory is accredited with the Southern African Development Community Accreditation Service (SADCAS) to **ISO17025:2005**.





# OUR SERVICES

## What we do

### **ROADS**

A leader in the application of latest technology, providing design solutions for pavement and geometric design

### **BRIDGES**

From box culverts to multi-span bridges of numerous types, Rankin has designed and supervised a number of structures around Zambia

### **STRUCTURAL**

Utilizing the latest structural design software Rankin provides structural design for any size of project

### **RENEWABLES**

Rankin has been involved in the field for more than 25 years including hydro, solar and wind power projects

### **TOPOGRAPHIC SURVEY**

GPS and Total Station topographic surveys as well as full LiDAR and 3D mapping capabilities using a fixed wing drone owned by Rankin

### **MATERIALS/ GEOTECHNICAL**

ISO:17025 laboratory for all material testing requirements, and fully equipped field geotechnical services for ground investigations

### **TRAFFIC STUDIES**

Using industry - recognised equipment and software to measure and simulate traffic flows.

### **WATER & SANITATION**

Design and supervision of water and sewer systems for all types and sizes of development

### **DEVELOPMENT**

Infrastructure development of several large scale projects, including agriculture, energy, green estates, mixed use developments and industrial projects

### **ENVIRONMENTAL**

Providing high quality, multi-disciplinary environmental and social impact assessment services to a range of sectors

### **TURNKEY**

Extensive experience in design-and-build operations, having successfully completed a wide range of projects

### **ELECTRICAL/ MECHANICAL**

Full range of design services including wet services, HVAC, electrical layouts, reticulation and distribution design





## ROADS

- Traffic Projections
- Economic Analysis
- Hydrological Studies
- Site Supervision
- Topographic Surveying
- Highway Management Systems
- Geometric & Pavement Design
- Geotechnical Services
- Routine Maintenance
- Periodic Maintenance
- Complete Rehabilitation
- Turnkey Projects

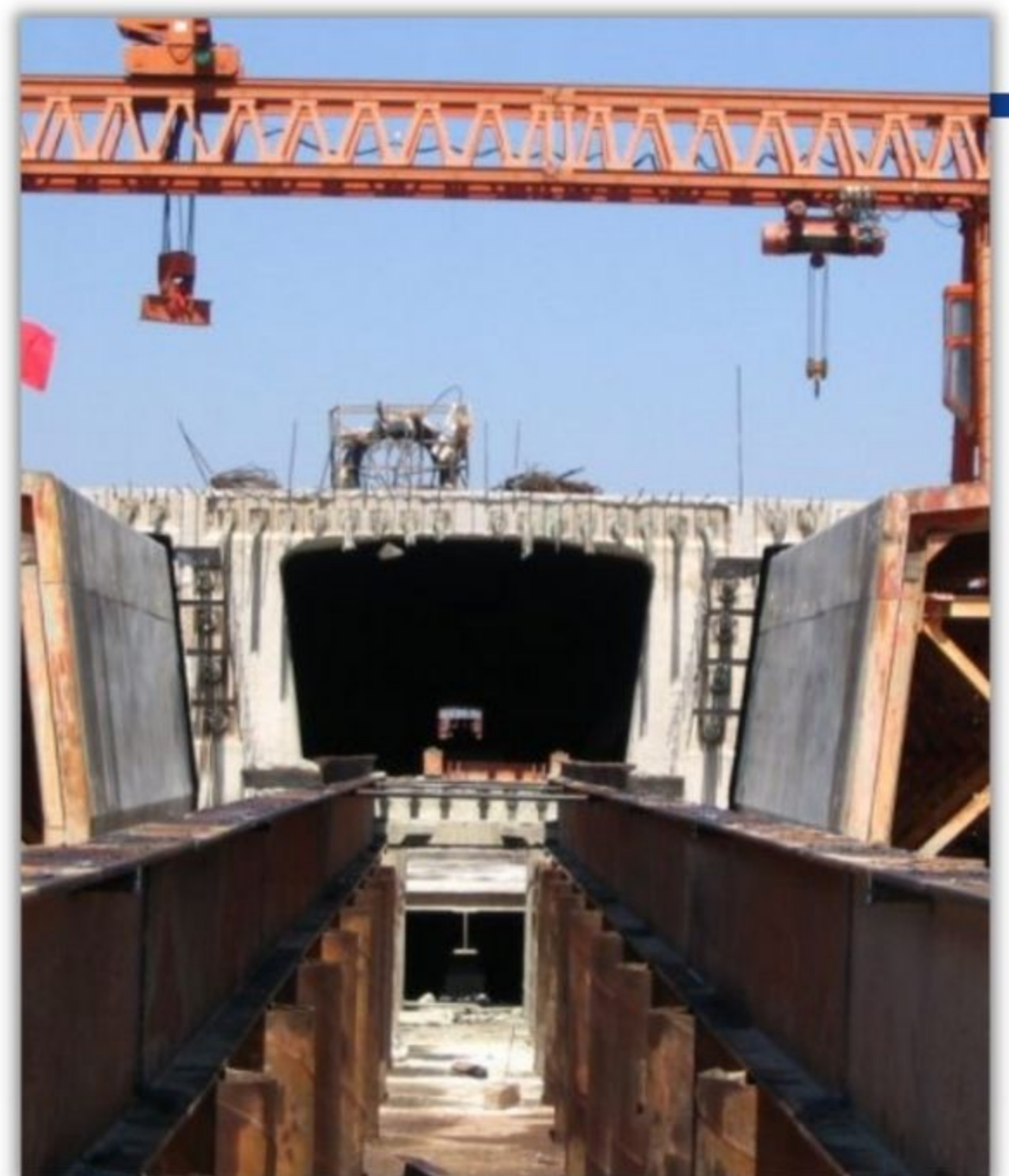
Investment in highway construction and rehabilitation has seen significant growth in Zambia over the last 20 years and continues to play a vital role in Zambia's transition from a land-locked to a land-linked country.

Rankin is a leader in the application of latest technology when providing design solutions for pavement design. Through its Falling Weight Deflectometer (FWD)/ Heavy Weight Deflectometer (HWD) equipment and associated software as well as other field investigation and lab testing works, Rankin is able to efficiently engineer programs of pavement reconstruction, including rehabilitation of existing roads, airport pavement design and highway management data collection and interpretation.

## BRIDGES

- Survey
- Geotechnical Study
- Hydrological Study
- Environmental impact
- Bridge Management Systems
- Structural Design
- Construction Supervision
- Structural Monitoring
- Turnkey
- Bridge Inspections

Highway infrastructure investment has seen rapid growth in Zambia and the Southern African region over the last 20 years. From box culverts to multi-span bridges of numerous types, Rankin has designed and built a number of structures around Zambia and the region. The firm has capabilities encompassing the entire spectrum of works related to bridge design, which includes topographic surveying, geotechnical works, hydrological studies, environmental impact assessments, structural design, construction supervision, and turnkey abilities. These capabilities can be integrated using BIM to allow connected design and construction.



## GEOTECHNICAL

- Undisturbed Soil Sampling
- Standard Penetration Tests (SPT, SPT(c))
- Dynamic Probing (DPH/DPSH)
- Core Drilling
- Plate Load Testing
- Triaxial Testing
- Direct Shear Testing
- Consolidation Testing
- Permeability Testing
- Compressive Strength

Rankin provides geotechnical and geophysical services in the field using our own equipment. This can be carried out in support of foundation design for civil and structural engineering projects.



## LABORATORY

- Soil Testing
- Aggregate Testing
- Concrete Testing
- Bitumen Testing
- Asphalt Testing

Our laboratory is accredited with the Southern African Development Community Accreditation Service (SADCAS) to **ISO17025:2005**. Situated at Rankin's head office in Lusaka, and operating since the mid 90's, our lab has provided technical support to a wide variety of projects undertaken in the construction industry, including many of the largest infrastructure projects in Zambia. Equipped with state-of-the art facilities, and personnel undergoing regular training and professional development, Rankin is proud to offer excellence in the materials and geotechnical field to suit our Client's needs. Project reports are prepared for all assignments, issued by qualified geotechnical engineers, and to the highest standards.





## STRUCTURAL

- Industrial
- Commercial
- Residential
- Highway Infrastructure

Zambia and the wider African region has seen significant growth in infrastructure development in recent years. Demand for residential, commercial and industrial developments has seen a change in the way that projects are planned, designed and delivered.

Rankin provides vertically integrated solutions in the fast changing built environment using Building Information Modelling (BIM) systems and the latest design technology. We provide clients with innovative and cost effective concepts and designs through the entire project lifecycle. We have developed a broad portfolio over 30 years and established ourselves as the Structural Engineering partner of choice in the region.

## RENEWABLES

- Hydropower (small and large scale)
- Solar PV
- Wind

Zambia has a renewable focused energy mix through its abundant hydropower resources which account for approximately 85% of total production. With demand for energy growing at a rapid pace, additional and alternative options to hydropower are now being developed that are clean and suitable for the conditions in Zambia.

Rankin has been involved in the field of power generation for more than 25 years, mainly concentrating in the hydropower sector. With recent interest in tapping Zambia's vast solar and wind energy potential, Rankin has been the local consultant of choice, partnering with large international consultants and contractors in the development of renewable energy sites.



## ENVIRONMENTAL

- Environmental Impact Assessment
- EHS Management & Compliance
- Health Impact Assessments
- Social Impact Assessments
- Corporate Sustainability Solutions
- Carbon Footprint Modelling
- Resettlement Action Plans

Zambia has a wealth of natural resources but faces increasing threats from deforestation, wildlife trafficking, industrial pollution and climate change. Changes in climate pose significant challenges to Zambia's ongoing efforts to combat poverty, reduce food insecurity, and sustainably manage natural resources.

Our customers face a challenging and changing business environment within which Rankin Engineering Consultants provides market leading environmental and social impact assessment services to support our customer's EHS and sustainability needs through the entire life process of a project.



## SURVEYING

- Topographic (GPS, Total Station)
- LiDAR + 3D Mapping
- Bathymetric
- Orthoimagery

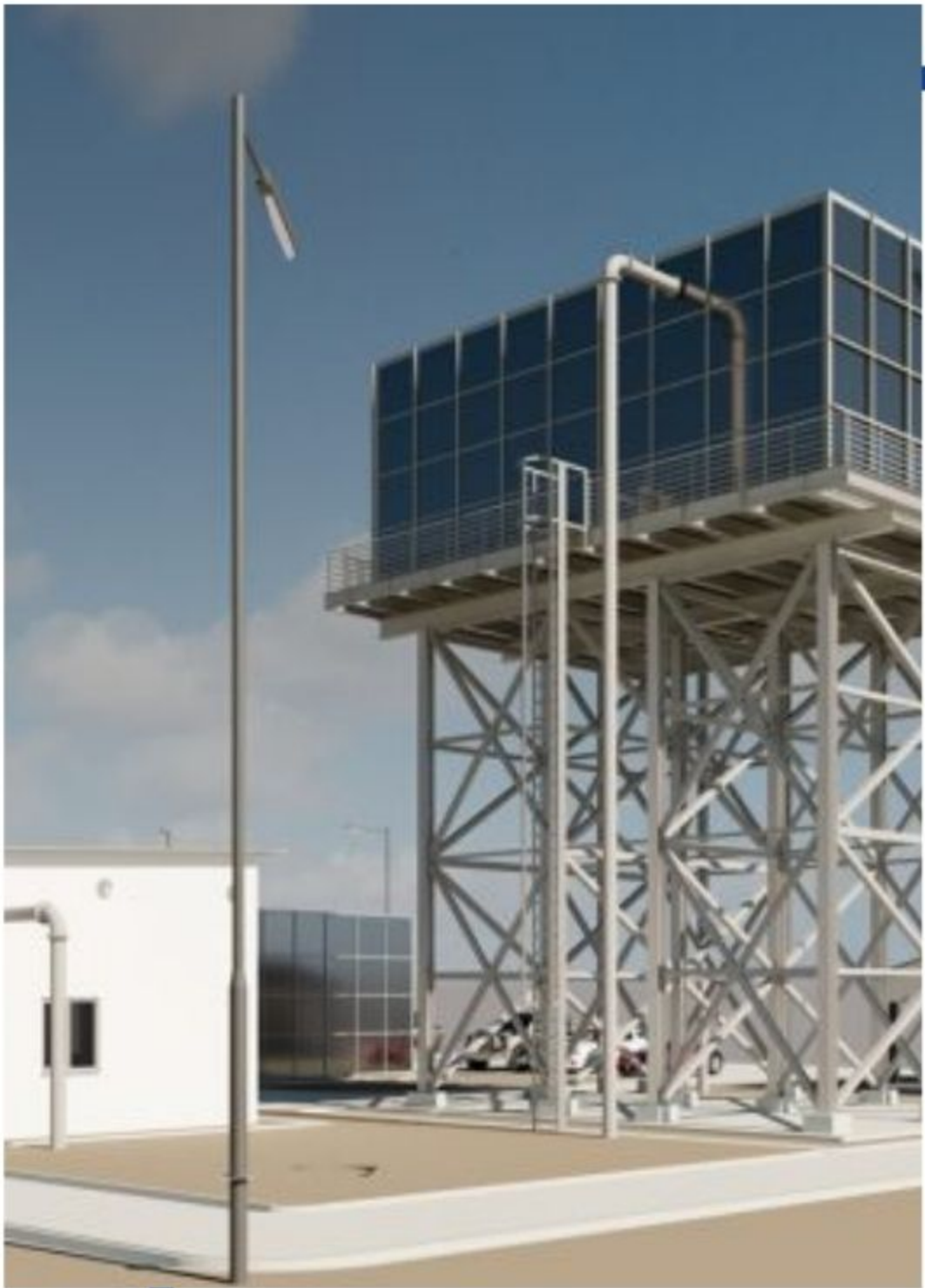
Widely used by professionals in the design and rehabilitation of infrastructure, topographic surveys are a fundamental part of reducing the risk of mistakes at the design and planning stage of a project.

Rankin takes full advantage of its own equipment to carry out topographic surveys for clients on a wide range of projects. Where required, this data can be further engineered using the full range of software which allows for road, water reticulation, sewer reticulation and electrical systems design.

Rankin owns and operates Global Positioning System (GPS) surveying equipment while ensuring level control is achieved accurately by use of Total Stations and Digital Levels. In addition Rankin owns and operates a fixed wing drone which is capable of collecting Orthoimagery and LiDAR data at high resolution.







## WATER & SANITATION

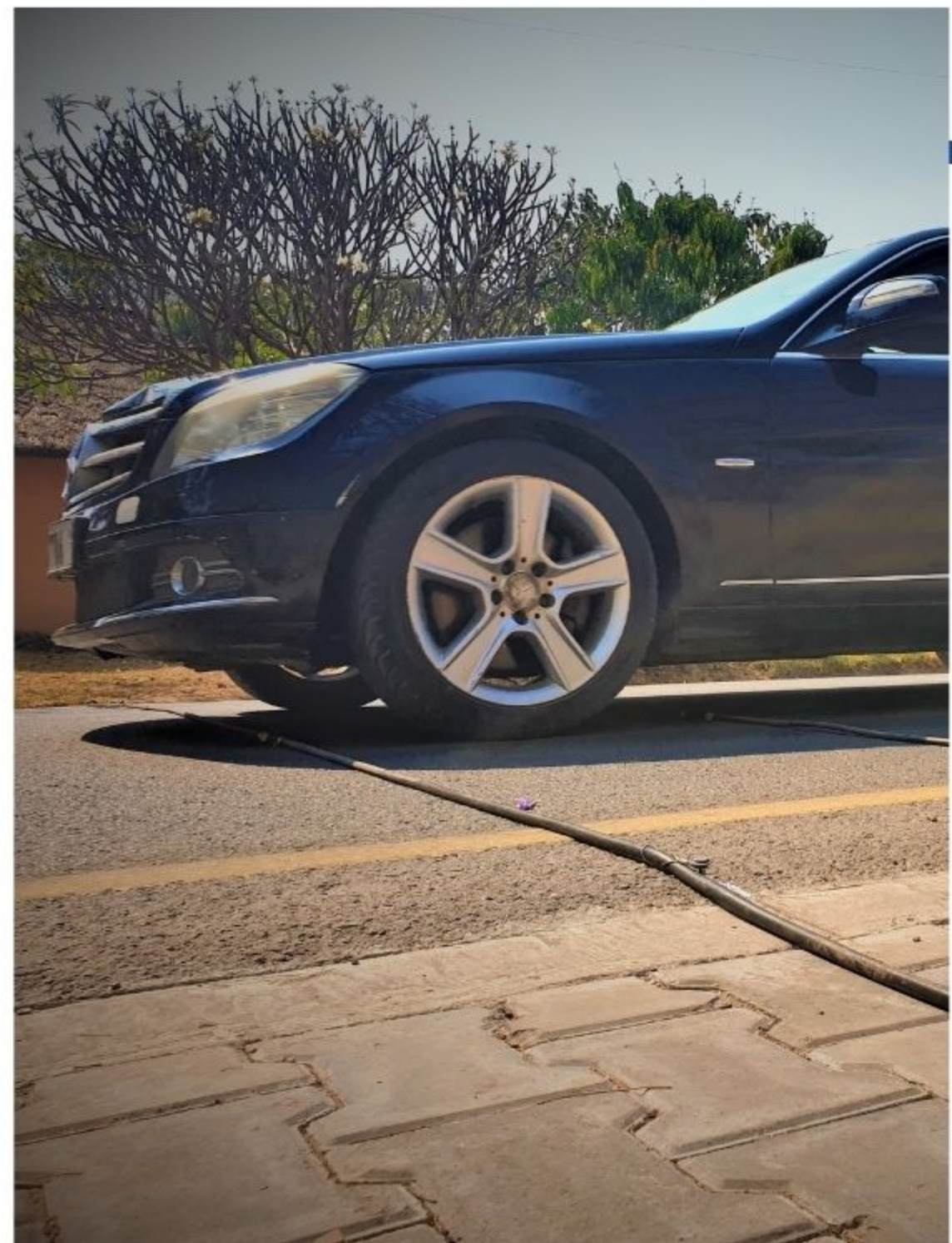
- Hydraulic Analysis
- Water Reticulation
- Sewer Networks
- Pump Stations
- Treatment Plants
- Geophysical Investigation
- Demand Analysis
- Non Revenue Analysis
- Sewer Treatment Design
- River Water Quality
- Asset Valuation
- Construction Supervision

Rankin has a wealth of in-house capability and experience in the design and supervision of water and sewer systems. Our services range from large rehabilitation projects in major cities, to complete design and construction of new infrastructure for new mixed use developments. Rankin also has experience in the hydrogeological sector, including ground water investigations and supervision of drilling works.

## TRAFFIC STUDIES

- Traffic Impact Assessments
- Manual & Automatic Traffic Counts
- Parking Demand Studies
- Origin-Destination Surveys
- Traffic Modelling and Analysis
- Junction Design

With urbanization and vehicle use increasing at a rapid pace in the Southern African region, efficiency in traffic management has become vital to urban planning and development. Rankin Engineering Consultants' traffic engineering division provides solutions to mitigate the impact of traffic for both the public and private sectors.





## DEVELOPMENT

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- Industrial
- Mixed Use
- Agricultural
- Community
- Environmental Impact
- Feasibility Studies
- Design of Infrastructure
- Project Management

Rankin can provide the expertise to deliver complete - ground up design and supervision of a wide range of development projects.

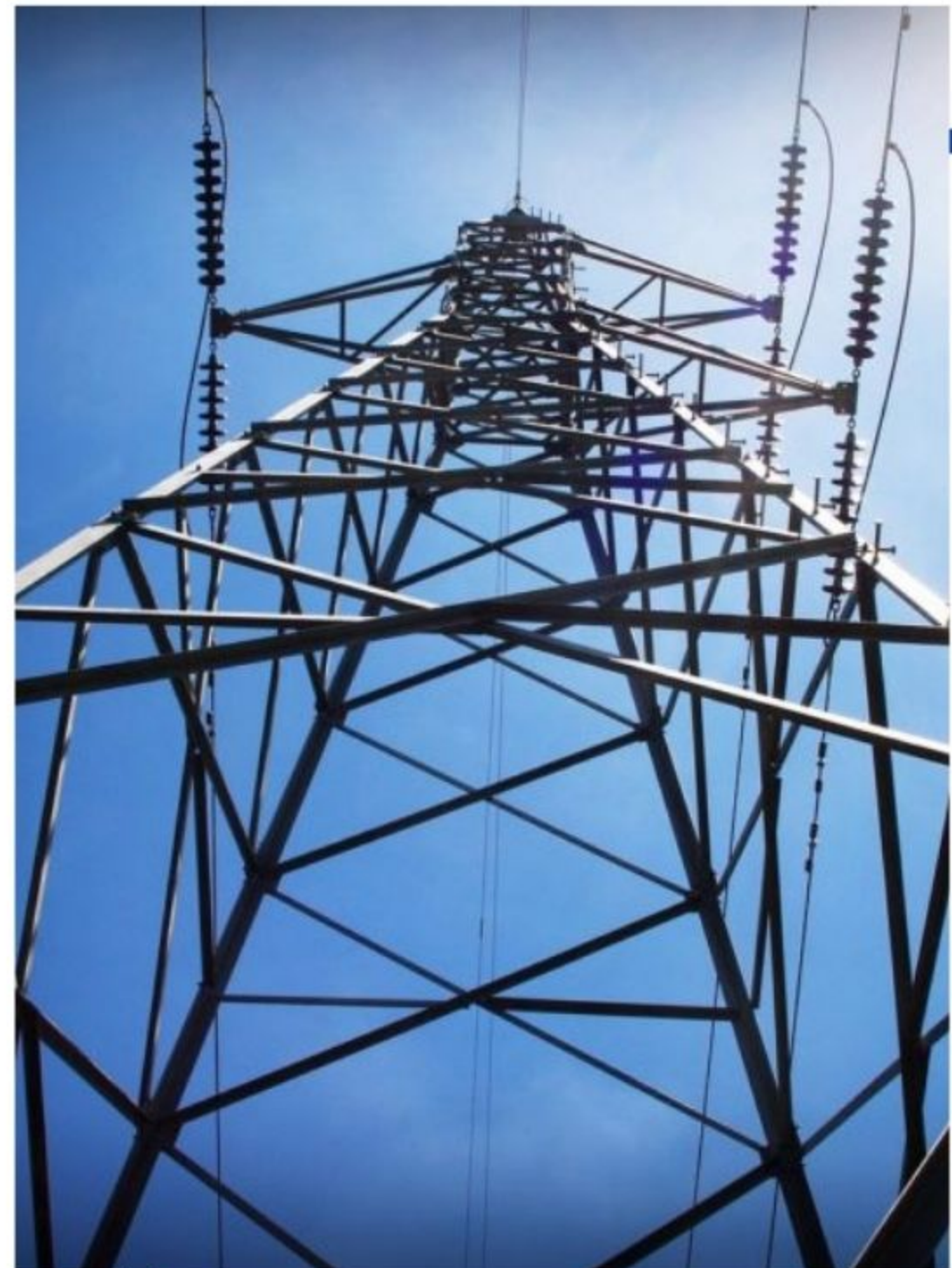
Rankin has been involved in complete infrastructure development of several large scale projects including agricultural, mixed use and industrial developments. Our integrated approach allows us to undertake works ranging from feasibility studies to total design, as well as construction supervision.

## ELECTRICAL/MECHANICAL

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- Substation Design
- Power Systems Planning
- Electrical Reticulation
- Transmission
- Energy Saving/Efficiency
- HVAC
- Pump Station Design
- Monitoring

Rankin's expertise in total design and management allows our firm to undertake projects ranging from rehabilitation of existing infrastructure to studies and designs of new structures and plants as well as end user utilization and maintenance programs. Rankin has carried out electrical works ranging from transmission line design to commercial, industrial and residential electrification, sub-station design in rural/peri-urban and urban settings.





## TURNKEY

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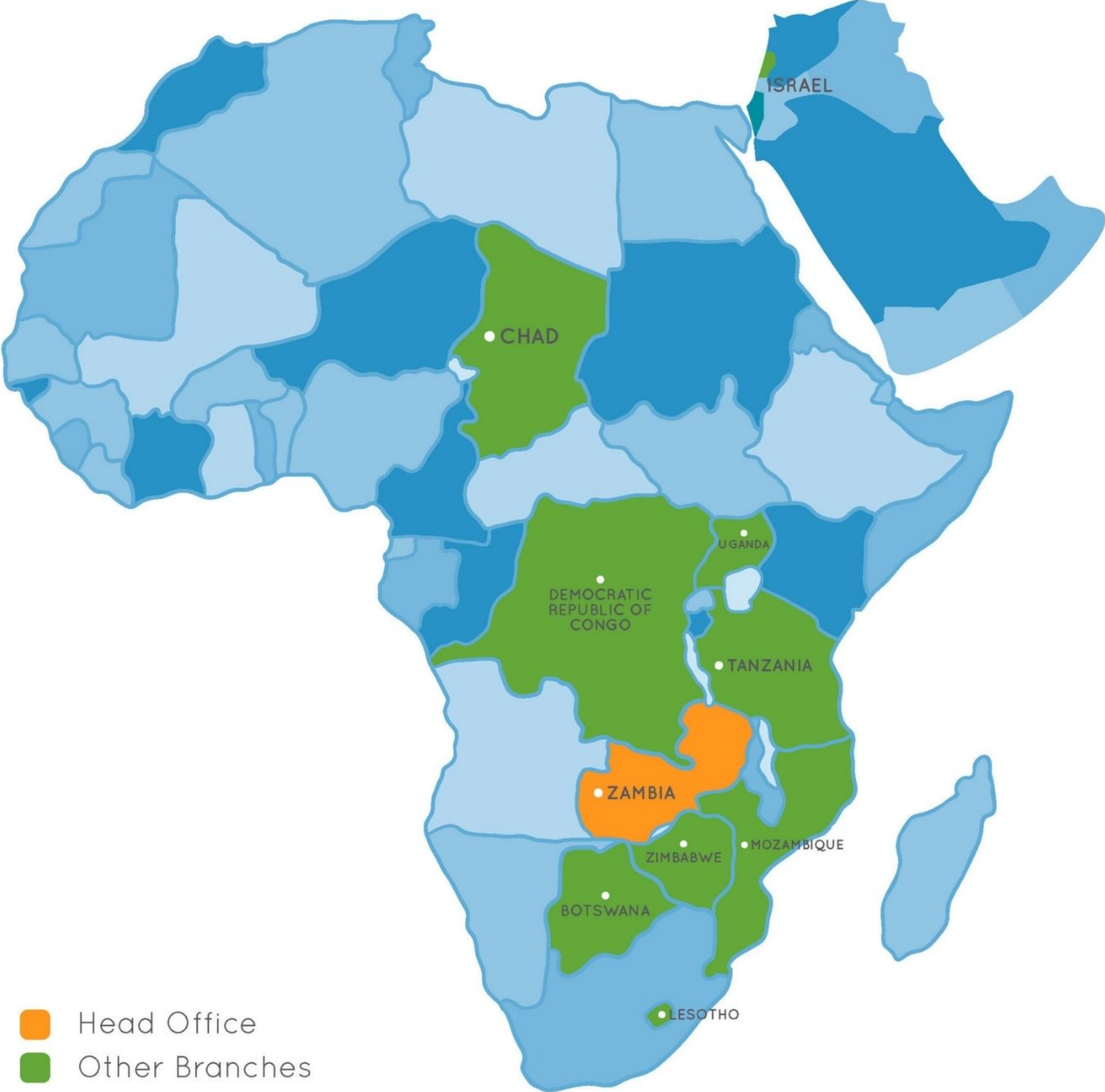
- Agricultural
- Industrial
- Development
- Water & Sanitation
- Bridges
- Roads
- Public Infrastructure
- Private Infrastructure

Rankin has extensive experience in design-and-build operations, having successfully completed a wide range of projects in this way, including roads, bridges, commercial and residential structures, industrial and agricultural projects, etc.

Rankin is ideally placed to offer such a service having a team of engineers experienced in the design of a wide range of projects. With project managers who have a track record of delivering the highest quality and meeting time constraints in harsh working environments, Rankin provides a service that has satisfied many of its clients.

# WHERE WE WORK

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# OUR CLIENTS & PARTNERS

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Ministry of Local Government and Rural Development



Ministry of Energy



Ministry of Water Development and Sanitation



Ministry of Infrastructure, Housing and Urban Development



# CONTACT US

## GET IN TOUCH

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Rankin's headoffice is centrally located in Lusaka, Zambia.

Should you need to contact us, please email: [info@rankinengineering.com](mailto:info@rankinengineering.com), and one of our representatives will be in touch with you as soon as possible or call us directly on the number below. Please visit [www.rankinengineering.com](http://www.rankinengineering.com) for more information

## CONTACT INFO

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### Call Us

+ 260 (211) 290085  
+ 260 (211) 291195

### Our Location

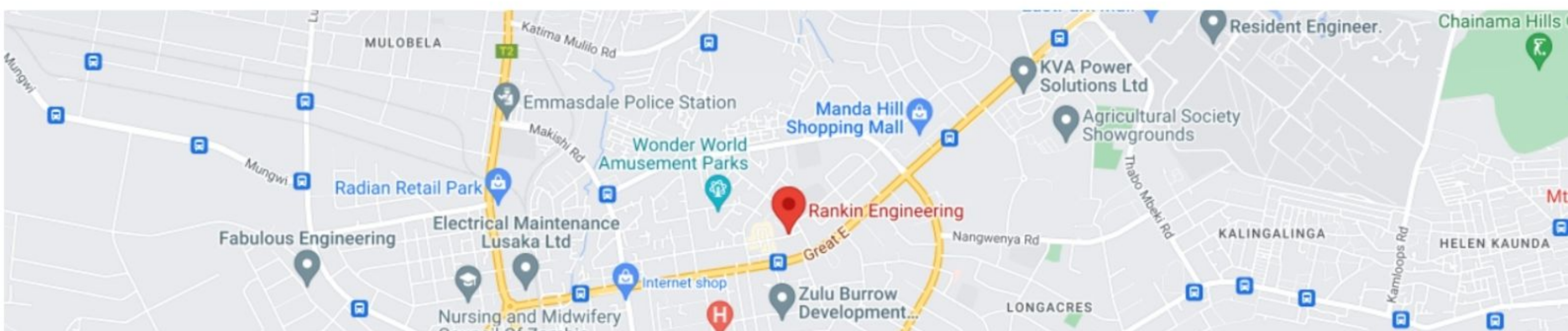
Chozi Road, Northmead, Lusaka, P.O.BOX 50566 Zambia

### Our Email

[info@rankinengineering.com](mailto:info@rankinengineering.com)

### Working Hours

0800 to 1700, Mon-Fri



 + 260 (211) 290085  
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