



SNA Civil and Structural Engineers (Pty) Ltd

(REG. NO. 2005/006128/07)

Company Profile



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SNA Key Services & Expertise

SNA Civil & Structural Engineers (Pty) Ltd has been involved in all aspects of Civil Engineering and in particular has specialised in Roads Engineering and other Infrastructure related work and all the sub-divisions thereof.

Design of Major Road Networks

Design of Grade Separated Interchanges

Planning, Design and Implementation of Toll Roads

Traffic and Transportation Engineering

Geotechnical Engineering and Materials Testing

Pavement Design, Management and Rehabilitation

Bridge and Structural Design in Concrete and Steel

Bridge Load Assessment and Testing

Commercial & Industrial Structures

Civil Infrastructure for the Mining Sector

Hydrology, Hydraulics and Storm Water Management

Railway Engineering

Airport Designs

Weighbridge Designs / Load Control Centres

Border Post Design

Civil Engineering Township Services

Community Based Projects and Training

Civil and Structural Design of Sports Facilities

Contract Procurement and Documentation

Project Management and Contract Administration

Programme Management

Mediation and Conciliation

Introduction



SNA Civil & Structural Engineers (Pty) Ltd is a Level 1 B-BBEE Accredited, Civil and Structural Consulting Engineering Services Company, with Materials Testing Laboratories.

Since its inception in 1955 in Pretoria, SNA Civil & Structural Engineers (Pty) Ltd has been involved in all aspects of Civil Engineering and in particular has specialised in Roads Engineering and other Infrastructure related work and all the sub-divisions thereof, including bridges and other related structures.

We currently have offices in Pretoria (Head Office), Pietermaritzburg and Richard's Bay (KwaZulu-Natal), Cape Town (Western Cape), George (Western Cape), East London (Eastern Cape) and Kimberley (Northern Cape), Bloemfontein (Free State), Mbombela (Mpumalanga), Polokwane (Limpopo) and Klerksdorp (North West Province).

SNA Offices in Africa: Lusaka (Zambia) and Gabarone (Botswana).

The company is currently operating in the following African countries: South Africa, Namibia, Botswana, Zambia, Mozambique, Kenya, DRC, Chad, Sierra Leone and Guinea.

The company has been practising for more than 60 years and has undertaken projects for almost all the State Road Authorities in South Africa as well as for various local authorities and other large private bodies. The company has enjoyed continued growth and the number of personnel is approximately 300 at present, including ± 50 qualified engineers. The company utilises modern state of the art computer hardware, software and networking resources resulting in quality designs.

The management of SNA Civil & Structural Engineers (Pty) Ltd are experts in their respective disciplines and are committed and disciplined to grow and develop in terms of the political landscape and demographics of South Africa. With the many years of solid engineering experience and knowledge, SNA Civil & Structural Engineers is well positioned to deliver to prospective and existing clients' high quality, state of the art engineering solutions.

SNA Key Services & Expertise

- *Design of Major Road Networks*
- *Design of Grade Separated Interchanges*
- *Planning, Design and Implementation of Toll Roads*
- *Traffic and Transportation Engineering*
- *Geotechnical Engineering and Materials Testing*
- *Pavement Design, Management and Rehabilitation*
- *Bridge and Structural Design in Concrete and Steel*
- *Bridge Load Assessment and Testing*
- *Commercial & Industrial Structures*
- *Civil Infrastructure for the Mining Sector*
- *Hydrology, Hydraulics and Storm Water Management*
- *Railway Engineering*
- *Airport Designs*
- *Weighbridge Designs / Load Control Centres*
- *Border Post Design*
- *Civil Engineering Township Services*
- *Community Based Projects and Training*
- *Civil and Structural Design of Sports Facilities*
- *Contract Procurement and Documentation*
- *Project Management and Contract Administration*
- *Programme Management*
- *Mediation and Conciliation*

The company implements and complies to a world-class quality management system (ISO 9001 : 2015 Accredited) contributing to total quality management in all of its operations and activities. To ensure that our employees are delivering best practice and latest innovative thinking solutions to our clients, the company has a much admired learning and development training policy, to allow them to keep abreast of superior knowledge, skills and break-through thinking in the field of innovative engineering solutions. At SNA Civil & Structural Engineers (Pty) Ltd we encourage “out-

of-the-box” thinking in everything that we do, and continue to inspire our employees to be innovative.

SNA Civil and Structural Engineers (Pty) Ltd is a limited liability company, managed by professionals (mostly civil engineers) and is entirely responsible for its own financing. None of the directors or employees has a vested interest in any company involved in financing, manufacturing or supplying of products related to the engineering field in which the company operates.

Mission Statement

The mission of SNA is to provide clients with engineering excellence in Planning, Design, Project Management and the Construction of Projects using state-of-the-art technology, teamwork and professionalism and to grow and develop in terms of the political landscape and demographics of South Africa.

Vision

Clients recognising SNA as their first choice when deciding on civil & structural engineering solutions. Employees knowing that SNA is the preferred employer in the consulting engineering fraternity. Associates & business partners recognising SNA as a valued partner in delivering world-class engineering solutions.

Awards

- **SAICE Transportation Engineering Award 2015: The First Full Scale EME Commission Project in South Africa.** SNA Project: *Periodic Maintenance of National Route 3 Section 1 from Candella Road (Km 8.500) to Paradise Valley (Km 17.000).*
- **Professional Management Revue Africa (PMR) Gold Award – 2006.** *Consulting Engineers to Public Sector, Transport & Roads for Medium Sized companies.*

- **SAICE Technical Excellence Project Award – 2005.** SNA Project: *Repairs to the CH Mitchell Bridge no 61 over the Mtamvuna River.*
- **SAICE Pietermaritzburg Branch Award for Technical Excellence – 2005.** SNA Project: *Repairs to the CH Mitchell Bridge No. 61 over the Mtamvuna River.*
- **SAICE Pietermaritzburg Branch Award for Technical Excellence – 2000.** SNA Project: *Rehabilitation of the CH Mitchell Bridge No. 61 over the Mtamvuna River near Port Edward.*
- **SAICE Pietermaritzburg Branch Award for Technical Excellence – 1999.** SNA Project: *Main Road 439: Hluhluwe to Lower Mkuze-Mzinene River Bridge.*
- **SAICE Pietermaritzburg Branch Award for Technical Excellence – 2002.** SNA Project: *Mooi-Mgeni River Transfer Scheme (Phase 1).*

SNA Commitment to Service Quality

SNA and its subsidiaries are committed to deliver a quality service to its client(s) using modern and up to date procedures and techniques.

SNA prides itself in terms of the recognized position achieved in the civil engineering field over extended years of high quality service delivery. The management of the company is confident that the above statement will be verified by all client organisations included in this overview.

The staff employed by the company, with minimal turn over, commits themselves to the mission of the company which enjoys high and quality service delivery and standing in the civil engineering environment.

SNA Company Structure

Board of Directors

JWB Stoltz, Pr Eng. (Managing Director)
QM Smith, Pr Eng.
R Shaik, Pr Tech Eng.
LN Diatta

Technical Directors

JAE Swanepoel, Pr Eng.
AJ Jacobs, Pr Eng.
R Nel, Pr Eng.
G Skinner, Pr Eng.
EM Conradie, Pr Eng.
JJ Gloy, Pr Eng.
H Kritzinger, Pr Eng.
G Broekman, Pr Eng.
AJ Gelderblom, Pr Tech Eng.
H Diedericks, Pr Eng.

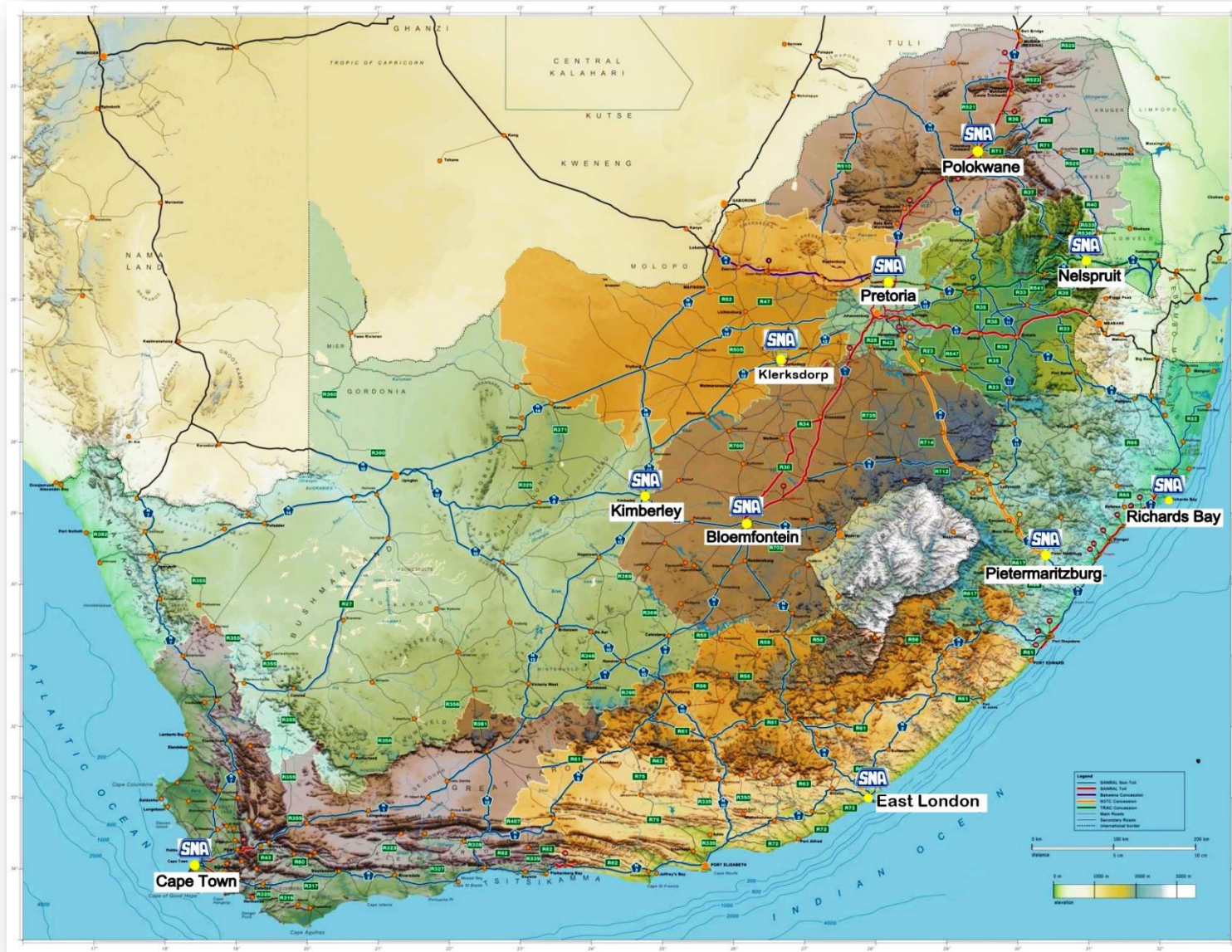
Technical Managers

S Nortier, Pr Eng.
W Buurman, Pr Eng.
M Marais, Pr Eng.
R Mabogo, Pr Eng.
D. Masombuka, Pr Techni.
F. Tsoetsi
CJ Pretorius, Pr Eng. Technical Specialist

Laboratory Managers

H Diederiks, Pr Tech Eng.
M Mulder

SNA Branch Offices



SNA Corporate Information



Subsidiaries of SNA: SNALAB

SNA has a service orientated subsidiary which assists the company in the performance of its functions, the SNALAB (Pretoria & Richards Bay) is principally a service arm of the company and also operates commercially as a laboratory providing services in the field of Civil Engineering, Soils and Material Testing.

SNALAB has suitable equipment and staff for a number of field laboratories for road building acceptance control and testing.

Black Economic Empowerment

SNA is a Level 1 BEE contributor company.

SNA transformed into a BEE company on 1 March 2005 using a broad based model for Black Empowerment. Permanent staff has been empowered by giving them direct shareholding in the company.

Quality Assurance (ISO 9001 : 2015)

SNA Civil & Structural Engineers (Pty) Ltd subscribe, implement and continuously improve on an in-house quality management system that is ISO 9001 : 2015 accredited by ISOQAR. Registration covers a Quality Management System for the provision of civil and structural engineering services.

Certificate No. 7759-Q15-001

ISO 9001 is the internationally recognised standard for the quality management of businesses. It applies to the processes that create and control the products and services an organisation supplies. It prescribes systematic control of activities to ensure that the needs and expectations of customers are met. It is designed and intended to apply to virtually any product or service, made by any process anywhere in the world.

SNALAB (Material Testing Laboratory)

The quality management system of SNALAB Pretoria and SNALAB Richards Bay has been accredited by SANAS in terms of ISO/IEC 17025:2005.

SNALAB Pretoria: Certificate no. T0345

Professional Indemnity Insurance

The company maintains professional indemnity insurance as follows:

Professional Indemnity

R70 000 000 each and every claim.

Public Liability

R70 000 000 each and every claim.

Occupational Health and Safety (OHS)

SNA has a commitment to comply with the Occupational Health and Safety Act and Regulation and in particular the Construction Regulations.

Environmental Management

SNA has a commitment to comply with all Environmental Regulations and to comply with the Environmental Management Plan as compiled per project.

Membership

SNA Civil and Structural Engineers (Pty) Ltd is a member of the following engineering institutions:

- Consulting Engineers South Africa (CESA) No. 234
- South African Road Federation (SARF) (10 March 1964)
- Concrete Manufacturers Association (CMA)
- Concrete Society of Southern Africa (CSSA)

In addition, **individual members of staff** are, in their personal capacity, members of the following institutions:

- South African Institution of Civil Engineering (SAICE)
- Institute of Structural Engineers (UK)
- Institution of Civil Engineers (ICE) (UK)
- International Society for Concrete Pavements
- Society for Asphalt Technology (SAT)
- South African Council for Project and Construction Management Professions (SACPCMP)
- British Engineering Council (Registered as Chartered Engineers)
- Road Pavement Forum
- Project Management Institute
- Zambian Institute of Engineers
- Botswana Institute of Engineers

SNA Employees



SNA Technical Personnel

SNA Civil and Structural Engineers and SNALAB employs technical staff and material testers whom are performing Site Monitoring duties, Contract Administration and Material Testing on a permanent basis.

The total staff compliment of SNA has been approximately 300 persons over the last 5 years.

Skills Development

Continuous Professional Development (CPD)

- SNA and SNALAB accept full financial and planning responsibility to enable registered professionals to attend applicable courses as required by the various professional bodies.
- SNA further subscribes to a policy of specialized development and training in the field of civil engineering for identified professional employees to ensure high quality technical service delivery at all times.

In-house Training

- SNA and SNALAB are committed to continuous in-house training and development of technical and other staff. Special programmes are maintained for this development.
- Further to the above SNA use the services of consultants namely Messrs. G.B. Hart and D.S. Temple, all of whom each have in excess of 40 years of applicable experience in the field of road and bridge engineering.

Employment & Training of HDI (Historically Disadvantaged Individuals) Employees

It has been the policy of the firm over the past 20 years to both employ suitably qualified HDI's and also to train existing technical employees to develop new skills and carry out more responsible work. In this regard a number of technical assistants have been trained and are now able to carry out specialist work. In recognition of this the company's policy allows for the issuing of equity shares in the company to successful HDIs.

Empowerment of SNA & SNALAB Employees

In the model adopted by SNA all the staff can be empowered by becoming shareholders in the company. Shares are offered to all permanent staff and the shareholding is based on their occupational categories and levels within the firm.

The Consulting Engineer & the Limited Company

The nature and working environment of the consulting engineer in South Africa differs little from those of his counterparts in North America and most European countries.

All consulting engineers are subject to some form of registration. In terms of the Professional Engineers Act individuals are obliged to register with the Engineering Council of South Africa (ECSA) as Professional Engineers, Technologists or Technicians. Without such registration and without complying with certain other requirements, one may not practice as a consulting engineer.

A private professional consulting engineering practice is run as a business by an individual, partnership or company. The practice enters into contracts to provide professional engineering consulting services and to design and monitor the construction of engineering projects.

South African law provides for companies to be formed to fulfill the requirements of professional practices. The company is fully liable for the professional work undertaken in the case of a limited liability company.

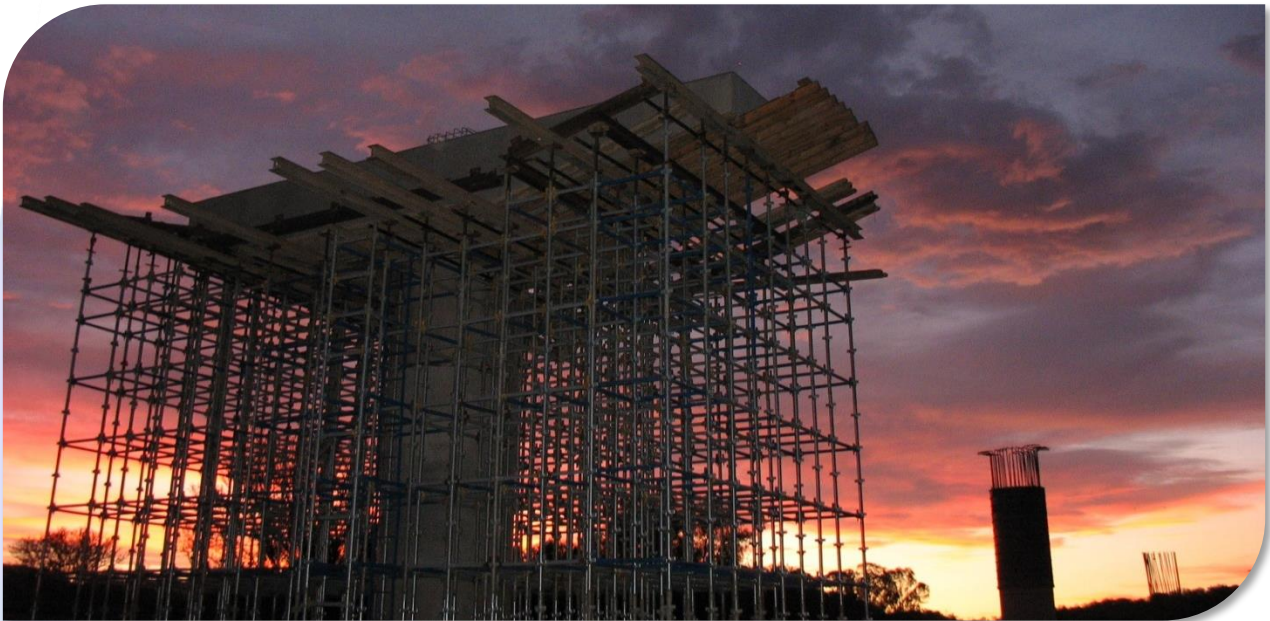
In the case of a consulting engineering firm, the majority of the shares are normally held by the directors and active partners or individuals in the company.

Further Information Required

Any further information or specific details required (and/or verification of information herein supplied) will be provided by the Management of SNA Civil and Structural Engineers (Pty) Ltd.

This overview of the company is being offered in good faith as to enable the reader insight into the company regarding its standing in the engineering field, the composition of the company and its staff as well as its expertise and past experience.

SNA Expertise & Experience



Services Provided by the Company

Design of Major Road Networks

Design of Grade Separated Interchanges

Planning, Design and Implementation of Toll Roads

Traffic and Transportation Engineering

Geotechnical Engineering and Materials Testing

Pavement Design, Management and Rehabilitation

Bridge and Structural Design in Concrete and Steel

Bridge Load Assessment and Testing

Commercial & Industrial Structures

Civil Infrastructure for the Mining Sector

Hydrology, Hydraulics and Storm Water Management

Railway Engineering

Airport Designs

Weighbridge Designs / Load Control Centres

Border Post Design

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Contract Procurement and Documentation

Project Management and Contract Administration

Programme Management

Roads Engineering



Since its inception in 1955 SNA has in particular specialised in the field of Road Engineering which has been its core field of enterprise over the years. SNA has planned, designed and supervised the construction of hundreds of kilometres of surfaced rural and urban roads, freeways and interchanges and played a major role in the development of the road infrastructure network of Southern Africa. The firm has undertaken projects for almost all the State Road Authorities in South Africa as well as various Local Authorities, other large private bodies and neighbouring countries.

As the road infrastructure network has developed, it has required maintenance and rehabilitation to provide the public with good roads. SNA has developed skills in Road Pavement Management Systems and Road Rehabilitation Systems and is able to offer clients specialist services in this field.

SNA offers professional services in the full spectrum of skills required for developing roads, freeways and access and fully directional interchanges in South Africa including the development and integration of the following:

- **Feasibility studies**
- **Route evaluation and location**
- **Traffic studies**
- **Consultation with national, provincial and local authorities and the public**

- **Environmental impact analysis**
- **Negotiation with utility owners for the relocation of services**
- **Geometric design**
- **Pavement design**
- **Materials investigation, utilisation & design**
- **Storm water drainage design**
- **Bridges & other road related structures design**
- **Project documentation & tender evaluation**
- **Project management and site supervision**
- **Weighbridge Designs**
- **Border Post Designs**

With the on-going need to maintain the existing South African Road Network, SNA has developed effective methods regarding the rehabilitation of both rigid and flexible pavements. Some facets of this specialist field include the following:

- **Visual surveys**
- **In-situ field testing**
- **Pavement analysis & deterioration models**
- **Pavement strategies**
- **Value engineering & economic analysis**
- **Specialised project documentation & tender evaluation**
- **Project management and site supervision**



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Planning, Design & Implementation of Toll Roads



SNA's experience in Toll Roads in South Africa and Mozambique started in the 1980's.

Extent

SNA has more than 30 Years of Toll Road Experience:

- Initial Construction Works Designs±4100 Lane Kms
- Additional Construction Works Designs±3000 Lane Kms
- Bid Designs±5400 Lane Kms

Life Cycle Costing

- Divide Toll-Road in logical sections.
- Preparing winning Technical Proposals taking cognisance of Value Engineering.

- Pavement Strategies at Interventions
- Traffic Studies to develop Geometric & Pavement Upgrades.
- Initial Construction Works (ICW).
- Routine Maintenance Plan.
- Heavy Maintenance Plan.

Other PPP Experience

Gautrain High Speed Urban Rail System:

- 20km Main Line Design
- Complete Train Depot
- 2 Bus Depots

Route	Description	Type	Phase	Year	Approximate Length (Km)
N1-22	Warmbaths - Kranskop	State	Design & Construction	1986	20
N1-17	Kroonstad - Koppies	State	Design & Construction	1987	110
N1-23	Kranskop – Polokwane Toll Road	State	Bid Design	1994	143
N4	Witbank – Maputo Toll Road (Total 460km)	PPP	Bid, Design & Constr.	1997- Pres	370-SA; 90-Moz
N3	Heidelberg - Cedara	PPP	Bid, Design & Constr.	1997-Pres	427
N4 West	Pretoria - Zeerust	PPP	Bid Design	1998	246
A1	Jamaica: Kingston - Montego	PPP	Bid Only	2002	150
N1-20	Misgund – 14 th Avenue	State	Design & Constr.	2007	20
N1/N2	Winelands Toll Road	PPP	Bid Design	2009	190
M1	Mauritius Toll Road	PPP	Bid Design	2010	60
-	Nairobi-Nakuru Mau Summit, Kenya	PPP	Bid Design	2018	200
New Road	Lamu-Garissa-Isiolo Road, Kenya	PPP	Detail Design	2018	540
N1	N1-Toll Road, Conakry-Kindia, Guinea	PPP	Feasibility Study	2019	132
Tema Arterial	Tema Arterial Expressway	PPP	Preliminary Design	2019	12
DRC/Zambia	Kasomeno-Mwenda Toll Road	PPP	Owners Engineer	2020	185



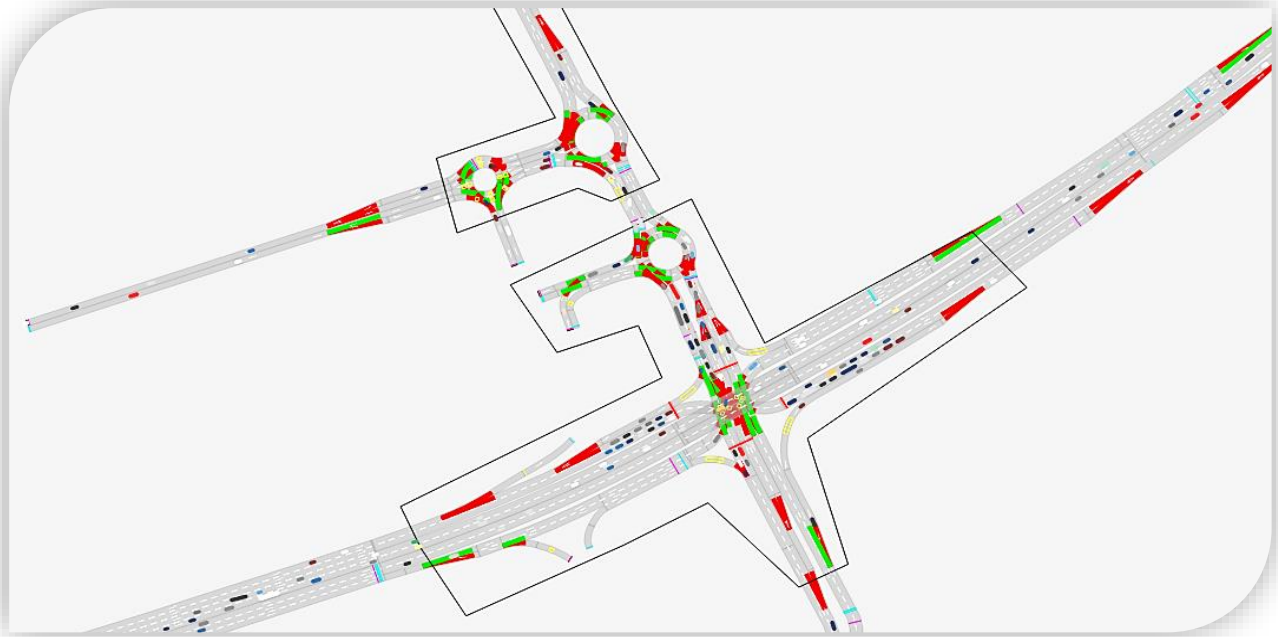
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Traffic & Transportation Engineering



SNA provides a comprehensive range of professional services aimed at addressing complex challenges in the transportation industry. We develop safe, sustainable solutions and strategic interventions to optimize transport networks and facilities. Our expertise and services includes:

- **Data Collection**
 - Traffic counts and Pedestrian surveys
 - Automatic Number Plate Recognition Surveys (ANPR)
 - Qualitative (Questionnaire and Interview) Surveys
- **Traffic Studies**
 - Traffic Impact Assessments (TIA) and Site Traffic Assessments (STA)
 - Parking Studies – Demand, Supply and Circulation Design
- **Traffic Engineering**
 - Traffic Capacity and Level of Service Analysis
 - Intersection layout and traffic signal design
 - Interchange layout and design
 - Transportation simulation modelling (Micro)
 - Toll Road Feasibility studies
 - Toll Plaza Capacity Analysis and Design
 - Weighbridge Designs
 - Border Post Designs
- **Transport Planning**
 - Public transport planning, operations, infrastructure and facility design
 - Pedestrian and Non-motorized Transport planning, development and design
 - Travel demand management studies
 - Bus rapid transit systems
 - HDM-4: Transportation Economic Analysis
- **Road Safety Engineering**
 - Road Safety Auditing
 - Road Sign and Road Marking layout design
 - Traffic Accommodation layout design (construction phase)
 - Traffic Calming Measures



Road Rehabilitation, Design & Supervision



Taking into account the economic restrictions regarding infrastructure development it is of vital importance to implement the most economic and cost effective road rehabilitation strategies. SNA has been involved in rehabilitation projects for many years and has developed effective repair strategies with regard to flexible as well as rigid pavement structures.

- **SNA uses the latest technology for pavement analysis and deterioration models in its road rehabilitation design.**
- **Years of experience enable SNA to carry out cost effective supervision of rehabilitation projects.**
- **High levels of head office and site supervision are maintained, irrespective of the size of the project.**
- **SNA focuses on training and practical knowledge transfer to site personnel regarding rehabilitation techniques.**
- **Proper resurfacing seal designs to fit prevailing conditions are regarded to be of utmost importance and are undertaken by senior staff members.**

The rehabilitation design and supervision sections are integral parts of SNA and all rehabilitation projects are managed to address all facets of road rehabilitation.

- ***Pavement surveys and analysis***
- ***Pavement repair strategies***
- ***Drainage repair and upgrading***
- ***Bridge repair and upgrading***
- ***Safety and capacity issues***
- ***Road side furniture repair and upgrading***
- ***Environmental issues***
- ***Value engineering***
- ***Cost estimates and budgets***
- ***Product performance guarantee system (PPGS) contracts***
- ***Specifications and contract documents***

Where required, SNA has the resources and equipment to undertake the following investigations and tasks:

- ***Material tests***
- ***DCP tests***
- ***Test pit investigation***

SNA uses the latest sophisticated computer software for pavement performance analysis.



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Bridge Structures



Since 1955 SNA has designed and supervised the construction of several hundred bridges and has gained experience and expertise in the design of all types of bridges.

State-of-the-art design techniques and up-to-date computer programs for both design and drafting enable SNA to offer professional design services in:

- **Reinforced concrete design**
- **Prestressed concrete design in pretensioned precast concrete and post-tensioned cast in-situ concrete**
- **Composite bridge design in steel, precast and reinforced concrete**
- **Structural steel bridges**
- **Design of other road related structures, e.g. culverts, sign gantries and canals.**

In addition to designing new bridges, SNA has extensive experience in:

- **Bridge management systems**
- **Bridge inspections**
- **Bridge rehabilitation and repairs**
- **Bridge widening and upgrading**
- **Bridge load assessment and testing**

Over 100 bridges have been rehabilitated on the Witbank to Maputo toll road as part of the Maputo Development Corridor for which SNA is the Consulting Engineer.



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Commercial & Industrial Structures



Since 1955, SNA has designed and supervised the construction of numerous commercial and industrial building projects. This has involved the use of both reinforced and prestressed concrete and structural steelwork. State-of-the-art design techniques and up-to-date computer programs for both design and drafting enable SNA to offer professional design services for:

- **Office developments**
- **Factory / warehouse developments**
- **Townhouse complexes / retirement villages**
- **Sports facilities / recreation halls**
- **Hospitals**

- **Schools**
- **Churches**
- **Aircraft hangers**
- **Industrial hard stands**
- **Cold rooms**
- **Water towers**

We also undertake:

- **Rehabilitation of existing structures to extend their safe, useful life.**
- **Strengthening of existing structures so that they can be used for purposes other than those for which they were originally intended.**



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Civil Infrastructure for the Mining Sector



Since its inception in 1955 SNA has been involved with the mining sector providing civil infrastructure for new mines, upgrading infrastructure of existing mines and relocating existing provincial infrastructure to facilitate open cast and underground strip mining. SNA has also carried out specialist sub-design appointments for several specialist mining consultants.

These projects include:

- Relocating existing provincial infrastructure (Road P90/1) for Kriel Coal mine and
- Relocating existing provincial infrastructure (Road 455) for Kleinkopje Colliery.
- Deviation of road 1682 for New Denmark Colliery.
- The construction of protection measures for a rail over mine haul road bridge for ATCOM coal mine.
- Access road to No. 16 Shaft Impala Platinum mine.
- Haul road for Richards Bay Minerals (RBM).
- Bridge over the Nhlabane River for haul road for RBM.
- New interchange ramps on National Route N2 for EXXARO sands (includes checking existing bridge for mine haul vehicles).
- Pre-feasibility study for the road infrastructure for transporting of coal to rail sidings for EXXARO.
- New access road to waterfall box cut for Aquarius Platinum.
- Palesa Mine access road and intersection upgrade.
- Wash bays for mine trucks at Kolomela Mine for Kumba.



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Railway Engineering



Over the past decade SNA Civil and Structural Engineers has been involved in various Railway design projects for the State Rail Authority including the improvement and upgrading of 14 stations for the SA Rail Commuter Corporation and more recently from 2006 onwards SNA was proudly involved in Rail Design of a large portion of The Gautrain Rapid Rail Link Project in Gauteng.

SNA has the personnel with specialist Railway backgrounds whom previously worked for the State Railway Authority, and are thus in the position to offer services in this field.

SNA offers the following specialist services relating to Railway Engineering:

- **Feasibility studies**
- **Consultation with authorities and the public**
- **Environmental impact studies**
- **Geometric railway design**
- **Marshalling yard designs**
- **Private Siding Designs**

- **Pavement (Formation) design**
- **Materials investigation, utilisation and design**
- **Stormwater drainage design**
- **Bridges and other rail related structures design**
- **Level crossing elimination designs**
- **Project documentation and tender evaluation**
- **Project management and site supervision.**

Through SNA's role as a leading designer on the Gautrain Rapid Rail Link Project and previous projects undertaken for the State, specialised skills have been developed in the design of Railway systems.

SNA has developed good relations with emerging consultants in South Africa and has entered into numerous joint venture partnerships with these companies and has also been involved with technical skills transfer in this regard.



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Pavement Management Systems



The effective management of a capital-intensive asset such as a road network is of utmost importance to any road owner whether within the government or the private sector.

SNA has many years of experience in pavement management systems and employs certified specialists who undertake the visual evaluations suitable for engineering assessment.

SNA considers the information database obtained on the road network to be the backbone of its pavement management system and follows new trends in this field in order to further refine its information database.

SNA not only offers a pavement management system but is also able to operate within or develop an integrated management system where a GIS forms the basis of the management system.

A pavement management system including the following items can be offered by experienced SNA technical staff:

- ***Compilation of road inventory (GIS if required)***
- ***Visual evaluations***
- ***Rehabilitation demand analysis***
- ***Deterioration models***
- ***Prioritisation***
- ***Optimisation***
- ***Long and short term budgeting***
- ***Implementation of rehabilitation design***
- ***Supervision***
- ***Updating the management system***
- ***Monitoring pavement performance***



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Since its inception in 1955 SNA has been involved with the Design, Upgrading and Rehabilitation of International Airports.

Projects Include:

- Gateway International Airport, Polokwane: Design and Upgrading of Runways
- Hoedspruit Airport: Rehabilitation of Runways
- OR Tambo International Airport: Rehabilitation of Pavement and Buildings

Programme & Project Management



SNA was contracted by the South African Government's National Treasury and the Department of Sport to execute the overall Programme Management of the construction phase of all ten the 2010 FIFA World Cup Stadia in South Africa.

The Programme Management entails the following aspects:

- *The oversight of the procurement of Contractors for the construction of the stadia.*
- *To ensure that all ten stadia were delivered on time, within the quality requirements set out by FIFA and the South African Government, as well as to oversee the total cash flow process during the construction phase. The cash flow monitoring process included the strict monitoring of the Contractor's cash flow versus the Contractor's construction program and payment milestones. Any deviation that could be a risk was highlighted with immediate effect to the relevant Government Departments for action.*
- *The monitoring of the programme was linked to an extensive reporting process, both at a high level as well as detailed reporting. The*

results of this process were to identify risks, cash flow constraints, from both Government as well as the Contractor's side and to then introduce remedial steps for action to ensure that the risks were eliminated and the process put back on track again.

Public Transport Infrastructure Projects:

SNA were also contracted by National Treasury to execute the Programme Management for the **Public Transport Infrastructure Projects (PTIS)**, related to the 2010 FIFA World Cup. The PTIS was on national as well as local government level. The purpose of the programme management appointment was to evaluate the PTIS master plans of the Host Cities as well as the expected feasibility and expenditure linked to these projects. The PTIS Projects were monitored over a prescribed period and projects not in execution at the milestone dates were called off and funds re-allocated to the projects which performed well. This programme saved millions of rand for projects which were tied up or were not feasible or did not get off the ground.

The process described above was a full time process for the duration of the construction period.



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Civil Engineering Township Services



SNA has developed expert skills in the planning, design and construction of the following residential / urban services:

- ***Municipal Roads***
- ***Stormwater Drainage***
- ***Potable Water Supply***
- ***Sewage Drainage***

With more than thirty years experience in this field SNA can provide town planners with valuable assistance in the technical and economic evaluation of planning alternatives.

Rehabilitation of:

- ***Roads and Streets***
- ***Stormwater Infrastructure***
- ***Potable Water Supply***
- ***Sewage Drainage***



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Civil Engineering Township Services



SNA has played a leading role in the planning, design and construction of townships in many towns and villages throughout South Africa. Through this involvement SNA has developed expert skills in the planning, design and construction of the following residential as well as industrial township services:

- **Arterial roads**
- **Bus routes**
- **Residential and industrial streets**
- **Stormwater drainage**
- **Bridges and culverts**
- **Wet services (Water and sewer reticulation)**

With more than thirty years' experience in this field SNA can provide town planners with valuable assistance in the technical and economic

evaluation of planning alternatives.

In addition to the design of new services SNA can also offer clients expert advice on the maintenance and upgrading of existing infrastructure. Particular fields of expertise include:

- **Upgrading of infrastructure in previously disadvantaged communities**
- **Flood repairs**
- **Pavement management systems**
- **Rehabilitation of roads and streets**
- **Funding applications (Business plans)**

SNA further has extensive experience in the application of labour intensive construction methods in the construction of new works as well as in the rehabilitation of existing infrastructure.



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Community Development Services



Over the past decade SNA has been involved in development projects in previously disadvantaged communities in accordance with the latest government policies. Such programmes have included the following:

- **Structural Joint Ventures**
- **Community based projects**
- **Development of SMME contractors**
- **Labour intensive construction and task based payment system**
- **Training of participants**
 - **SAFCEC/CEITS Accredited courses**
 - **Contractor development courses**
 - **Adult basic education and training (ABET)**

➤ **Community education assistance**

- **Bursaries for university and technician students**
- **Sponsorships of pupils at leading secondary schools**

Project in excess of R100 million have been undertaken in previously disadvantaged communities. Contract documentation incorporates structured joint ventures in line with the Government's latest targeted procurement policies for the development of affirmable business enterprises. Provision has been made for the engagement of local communities in task work programmes, community based construction and SMME development in accordance with the national framework agreement.



SNA Laboratories

Materials Testing & Investigations



Accredited Laboratory: ISO/IEC 17025: 2017 (Accreditation no. T0345)

Test methods include: SANS 3001, SABS/SAN S, TMH1 and TMH 5 Sampling methods



Introduction

SNALAB (Pretoria & Richards Bay) is a division of SNA Civil and Structural Engineers (Pty) Ltd but also operates commercially as a laboratory providing services in the field of Civil Engineering and construction Material Testing.

SNALAB has suitable equipment and staff for a number of site laboratories for road building and construction acceptance control and testing.

SNALAB Pretoria

The laboratory was established as “Padmaak Laboratorium Dienste” in 1961. A new testing facility was constructed during 1997 in Samcorpark Pretoria. The laboratory moved to 191 Vonkprop Street and was established under the new logo, SNALAB Pretoria, on 29th October 1997. SNALAB Pretoria is ISO 17025 2017 accredited since June 2007 for 52 test method, accreditation number: T0345 (Refer to

SANAS website: Accredited Facilities: www.sanas.co.za).

SNALAB Richards Bay

The laboratory was established in July 1993 as a commercial testing laboratory for the Alusaf project and offered commercial work since. SNALAB Richards Bay implement and maintain technical requirements as per ISO 17025 and SNALAB approved Quality manual.

Site Laboratories

Various site laboratories are in operation throughout South Africa, current projects include the R510, R63, N14, N2, R504 and R573. SNALAB Pretoria supplied laboratories for the following major construction projects over the last 18 years the GAUTRAIN, Majuba Rail, R21, R71, NTC3-N3, various TRAC-N4, R81, R571, R33-06, R33-07, R56, R61 to name a few. Site laboratories implement and maintain



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technical requirements as per ISO 17025 and SNALAB approved Quality manual.

Services

- **Civil Surveys: Centre Line, Borrow Pit & Geotechnical Investigations**
- **Site Acceptance and Proses control testing**
- **Construction Materials testing:**
- **Soils, Sand and Gravels**
 - Quality Control
 - Stabilisation Mix designs
- **Aggregate Testing**
 - Quality control
- **Concrete**
 - Quality Control
 - Durability Testing
- **Chemical testing**
 - Ph
 - Conductivity
 - Hydrometers
- **Bituminous Binders & Modified Binders**
- **Mixtures Design**
 - Concrete
 - Slurry
 - Asphalt

Quality Statement

The Management of SNALAB will employ all responsible care to ensure that the required service and testing complies with ISO 1702:2017 and SANAS regulations.

- The Management of SNALAB is committed to client satisfaction by conforming to agreed requirements at all times.
- The Management of SNALAB shall strive to maintain an open and constructive relationship with all clients and all other stakeholders.

- The Management of SNALAB will ensure that all staff are familiar with and undertake to comply with the requirements detailed in the Quality Management System.

Occupational Health & Safety

SNALAB is committed to comply to the statutory requirements laid down by the Occupational Health and Safety Act through implementation of requirements. Regular audits by external companies assure the compliance to the Act.

Accreditations

SNALAB Pretoria Accreditation Number: T0345

Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Equipment / Techniques Used
AGGREGATES	
Organic Impurities in Fine Aggregates	SANS 5832
Bulk density of coarse and fine aggregates	SANS 5845
Partial size analysis of aggregates by sieving	SANS 3001-AG1
Determination of the average least dimension of aggregates by direct measurement	SANS 3001-AG2
Determination of the flakiness index of coarse aggregates	SANS 3001-AG 4
ACV and 10% FACT values of coarse aggregates	SANS 3001-AG 10
Determination of rock durability using 10% FACT values after soaking in ethylene glycol	SANS 3001-AG 15
Determination of the bulk density, apparent density and water	SANS 3001-AG 20



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Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Equipment / Techniques Used
absorption of aggregate particles retained on the 5mm sieve for road materials	
Determination of the bulk density, apparent density and water absorption of aggregate particles passing the 5mm sieve for road materials	SANS 3001-AG 21
Apparent Density of Crushed Stone Base	SANS 3001-AG 22
ASPHALT	
Making of asphalt briquettes for Marshall tests and other specialized tests	SANS 3001-AS1
Determination of Marshall stability, flow and quotient	SANS 3001-AS2
Determination of bulk density and void content of compacted asphalt	SANS 3001-AS10
Determination of the maximum void-less density of asphalt mixes and the quantity of binder absorbed by the aggregate	SANS 3001-AS11
Determination of the soluble binder content and particle size analysis of an asphalt mix	SANS 3001-AS20
BITUMEN	
Penetration of Bitumen Materials	ASTM D5
Ball Penetration Resilience	TG1-MB10
Bitumen Rubber Standard Test for Softening Point (Ring & Ball Apparatus)	ASTM D36
Determination of Compression Recovery	TG1-MB11
Determining the flow characteristic	TG1-MB12
Ball penetration test for the design of surfacing seals	SANS 3001-BT10

Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Equipment / Techniques Used
Texture depth measurement for the design of surfacing seals	SANS 3001-BT11
CONCRETE	
Mixing fresh concrete in the laboratory	SANS 5861-1
Sampling of fresh mixed concrete	SANS 5861-2
Making and curing of test specimens	SANS 5861-3
The determination of the slump of freshly mixed concrete.	SANS 5862-1
Compressive strength of hardened concrete	SANS 5863
Drilling, Preparation and Testing Strength of Cores taken from Hardened Concrete	SANS 5865
SOILS & GRAVELS	
The determination of the in-place dry density and moisture content of soils and gravel's by nuclear methods	SANS 3001-NG5
Cement or lime content (EDTA) of stabilised materials	TMH 1 A 15(a)
The electronic determination of the PH value of soil suspension	TMH 1 Method A20
The method for the determination of the conductivity of a saturated soil paste and water	TMH 1 Method A21T
Wet preparation and particle size analysis	SANS 3001-GR1
Dry preparation and dry particle size analysis	SANS 3001-GR2
Wet preparation of samples for plasticity index and hydrometers	SANS 3001-GR5
Determination of the one-point liquid limit, plastic limit, plasticity index and linear shrinkage	SANS 3001-GR10



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Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Equipment / Techniques Used
Determination of moisture content by oven-drying	SANS 3001-GR20
Determination of the maximum dry density and optimum moisture content	SANS 3001-GR30
Determination of the maximum dry density and optimum moisture content of laboratory mixed cementitiously stabilised materials	SANS 3001-GR31
Determination of the California bearing ratio	SANS 3001-GR40
Preparation, compaction and curing of specimens of laboratory mixed cementitiously stabilised materials.	SANS 3001-GR50
Sampling, preparation, compaction and curing of freshly mixed field cementitiously stabilised materials including determination of maximum dry density and optimum moisture content	SANS 3001-GR51
Determine the unconfined compression strength of compacted and cured specimens of cementitiously stabilised materials	SANS 3001-GR53
Determination of the indirect tensile strength of compacted and cured specimens of cementitiously stabilised materials	SANS 3001-GR54
Determination of the initial stabilizer consumption of soils and gravels	SANS 3001-GR57
SAMPLING	
Sampling from Sampling Pit in Natural Gravel, Soil & Sand	TMH5 MA2
Sampling from Stockpiles	TMH5 MB1

Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Equipment / Techniques Used
Sampling of Treated Pavement Layers	TMH 5 MB 10
Sampling of Road Pavement Layers	TMH 5 MC 1
Sampling of Asphalt or Concrete from completed layer or structure	TMH5 MC2
Division of sample using the rifler	TMH5 MD1
Division of a Sample by Quartering	TMH5 MD2



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SNA Project Experience

A full record of projects is available on request.

<p><i>Assessment, Preliminary Design, Detail Design and Supervision: Rehabilitation and Upgrade of MDC Section 10 A&B: From Mara to Matsulu (28 km)</i></p> <p>Client: Trans African Concessions (TRAC) Value: R 2.3 billion Service: Detail Design, Tender Documentation, Construction Monitoring Date: January 2023 - Current</p>	
<p><i>Preliminary Design and Supervision of the N4 Maputo Corridor: Upgrade and Rehabilitation of Existing Freeway Alignment of N4-7 Karino to Mara (Road D286) (7,3 km)</i></p> <p>Client: Trans African Concessions (TRAC) Value: R 400 million (estimate) Service: Preliminary Design, Construction Monitoring Date: August 2025 - Current</p>	<p style="text-align: center;"><i>Tender Stage</i></p>
<p><i>The Rehabilitation of MDC 1G 2A-C Solomon Mahlangu to Bronkhorstspruit (35 km)</i></p> <p>Client: Trans African Concessions (TRAC) Value: R 520 million Service: Construction Monitoring and Quality Engineer Date: July 2025 - Current</p>	
<p><i>Consulting Engineering Services for the Supervision of the Slope Stabilisation on National Route N10 Section 4: Witkrans Nek Cutting, National Route R63 Section 7: Ouberg Pass Cuttings and National Route R390 Section 1: Cradock Cutting</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R246 Million Service: Construction Monitoring Date: June 2024 – Current</p>	
<p><i>Design maintenance plans for Gerotek Access Roads and Parking Area Pavement rehabilitation</i></p> <p>Client: Gerotek Value: R7,5 Million Service: Detail Design, Tender Documentation Date: September – December 2023</p>	<p style="text-align: center;"><i>Design only</i></p>
<p><i>Improvement of National Road R37 Section 3 Lydenburg (km 0.0) to Sabie (km 43.49)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R341 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: May 2022 - Current</p>	<p style="text-align: center;"><i>Design Stage</i></p>
<p><i>Design, Procurement and Construction Supervision of Gautrain Test Platform</i></p> <p>Client: Bombela Civils Joint Venture (Pty) Ltd. Value: R2,4 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: April - May 2022</p>	<p style="text-align: center;"><i>Design Stage</i></p>
<p><i>Consulting Engineering Services for the Design and Construction Monitoring for Pavement and Settlement Repairs on National Route 2, Section 30 from Bushveld Retreat Farm (km 47.00) to Hluhluwe Interchange (km 55.00)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R60 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: August 2021 - Current</p>	<p style="text-align: center;"><i>Currently in Design Stage</i></p>

<p><i>Consulting Engineering Services for the Administration and Construction Monitoring of the Capacity Improvements on National Route 2 Section 25 from Edwin Swales Interchange (Km 11.80) to South of EB Cloete Interchange (km 16.00)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R315 Million (R4,5 Billion) Service: Detail Assessment, Preliminary Design and Detail Design, Tender Documentation, Construction Monitoring and Design Advisory Services Date: 2013 - Current</p>	
<p><i>Consulting Engineering Services for the original Detailed Design and Tender Documentation (SNA) and for the Contract Administration and V3 Supervision for the Upgrade of N1-3 Westville Viaduct to Paradise Valley Interchange, Contract N.003-010-2017/9 (V3)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R35 Million (R4,7 Billion) Service: Design Advisory Services Date: November 2021 - April 2022</p>	
<p><i>Contract SANRAL N.002-250-2009/95-B: Consulting Engineering Services for the Administration and Construction Monitoring for Upgrade of National Route 2 Section 25 between Wiggins Road Underpass (km 16.0) to Umgeni Road I/C (km 20.7) and National Route 3 Section 1 between Sherwood I/C (km 8.4) to Westville Viaduct (km 11.8), EB Cloete Interchange</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R50 Million (R50 Billion) Service: Design Advisory Services Date: November 2021 - April 2022</p>	
<p><i>Design of the Ashburton Interchange upgrade (km 1.80) and the Bellevue Interchange (km 4.50) on National Route 3 Section 3</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R3,95 Million (design only); Service: Preliminary Design, Detail Design and Construction Monitoring of Bridges & Ramps Date: 2012 - 2025</p>	
<p><i>New 1.2 MI Water Reservoir at Inkosi Albert Luthuli Central Hospital</i></p> <p>Client: Tsebo Facilities Solutions Value: R7,9 Million Service: Design, Tendering and Procurement, Construction Monitoring Date: 2018 - 2022</p>	
<p><i>Consulting Engineering Services for the New Ring Road on National Route N2 Section 17 and 18 around Dutywa</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R169 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: March 2021 - Current</p>	<p style="text-align: center;"><i>Currently in Design Stage</i></p>
<p><i>TRAC Master Planning for 8 Highway Sections along existing N4 Concession</i></p> <p>Client: Trans African Concessions (TRAC) Value: R500 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: April 2021 – October 2021</p>	<p style="text-align: center;">N/A</p>
<p><i>The Improvement of National Route 2 Section 1 between Swartklip (km 17,47) and East of Baden Powell Interchange (km 29,00)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R732 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: May 2021 - Current</p>	<p style="text-align: center;"><i>Currently in Design Stage</i></p>

<p><i>Ad-Hoc Structural and Drainage Consulting Engineering and Supervision Services for the Northern Region</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R103 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: July 2019 - Current</p>	
<p><i>The Periodic Maintenance of TR03103, MR00295, MR00294, DR01356 & OP06046 – Montague</i></p> <p>Client: Western Cape Government Value: R114,4 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2019 - Current</p>	<p>Currently in Design Stage</p>
<p><i>Rehabilitation & Upgrading of Nelspruit Bypass: Mataffin to Crocodile Valley, N4-7X km 46.00 to N4-7X Km 62.949 (along N4-8 BP ±18.5 km)</i></p> <p>Client: Trans African Concessions (TRAC) Value: R224 Million Service: Assessment and Design Date: 2019 - 2021</p>	
<p><i>Design and Engineering Services: D1559 Nhlabane Road Upgrade</i></p> <p>Client: Rio Tinto Management Services South Africa (Pty) Ltd Value: R0,750 Million Service: Detail Design Date: 2019</p>	<p>Design Project</p>
<p><i>Special Maintenance of R56, Section 5 from Dordrecht (km 0.0) to Indwe (km 36.7)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R304 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2016 - 2025</p>	
<p><i>Special Maintenance of R56, Section 4 from National Route N6 (km 0.0) to Dordrecht (km 35.3)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R253 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2019 - 2025</p>	
<p><i>N4 Maputo Development Corridor (MDC): Witbank to Maputo Toll Road - Section 9 Karino to Mara: Grade Separated I/C Karino between km 17.90 and km 22.30</i></p> <p>Client: Trans African Concessions (TRAC) Value: R300m Service: Detail Design, Tender Documentation & Construction Monitoring Date: 2019 - 2024</p>	
<p><i>Special Maintenance on National Route R390 Section 1 from Cradock (km 0.00) to Hofmeyer (km 62.50)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R145 Million Service: Preliminary Design, Detail Design, Construction Monitoring Date: 2018 - Current</p>	
<p><i>The Special Maintenance on National Route N2 from Ibika Section 17 (km 44.0) to Tetyana Section 18 (km 24.0)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R414 Million Service: Concept Design, Preliminary Design, Detail Design, Construction Monitoring Date: 2018 - Current</p>	<p>Currently in Design Stage</p>

<p><i>Rehabilitation of N4-3 (km 30.2 - km 41.76) and N4-4 (km 0.0 - km 6.6)</i></p> <p>Client: Trans African Concessions (TRAC) Value: R250 Million Service: Preliminary Design, Detail Design, Procurement, Construction Monitoring Date: 2018 - 2020</p>	
<p><i>The Periodic Maintenance of MR344, MR337, DR1522 and DR1525 - Herbertsdale and Gouritzmond Area</i></p> <p>Client: Western Cape Government Value: R95,8 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2018 - 2022</p>	
<p><i>New Printing Facility and Warehouse for CCL at Lords View Industrial Estate: Civil and Structural Services</i></p> <p>Client: Designdex Architecture and Design (Pty) Ltd Value: R85 Million Service: Preliminary Design, Detail Design, Tender Documentation, Construction Monitoring Date: 2017 - 2019</p>	
<p><i>Administration and Monitoring for the Improvement on National Route R67 Section 5 from Swart Kei River (km 15.4) to Queenstown (km 33.0)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R350 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2017 - 2023</p>	
<p><i>The Widening of the Maalgate River Bridge No. 2221 at km 15.1 on Trunk Road 2 Section 9 near the George Airport</i></p> <p>Client: Western Cape Government Value: R48,7 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2021 - 2025</p>	
<p><i>Periodic Maintenance of National Route R730 between Section 1, Sand River Street Junction (km 12.0) and Section 3, R34 to Odendaalsrus Intersection (km 12.9)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R150 Million Service: Construction Monitoring Date: 2016 - 2024</p>	
<p><i>Administration and Monitoring for the Upgrade of National Route R61 Section 6 from All Saints to Section 7 Baziya: Phase 2, Section 6 from km 68.5 to km 86.65</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R365 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2016 - Current</p>	
<p><i>The Rehabilitation of MR352 and MR355 near Wilderness</i></p> <p>Client: Western Cape Government Value: R128 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2016 - 2019</p>	
<p><i>Special Maintenance of National Route R58 Section 4 from Aliwal North (km 0.00) to Lady Grey (km 49.79)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R271 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2016 - 2025</p>	

<p><i>Periodic Maintenance of National Route R58 Section 5 from Lady Grey (km 0.00) to Barkley East (km 66.12) AND Special Maintenance for Slope Stability on National Route R58 Section 5 from Lady Grey (km 0.00) to Barkley East (km 66.12)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R452 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2016 - 2025</p>	
<p><i>The Periodic Maintenance (Reseal) of Trunk Road 88 Section 1 between De Rust and Uniondale</i></p> <p>Client: Western Cape Government Value: R35 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2016 - 2019</p>	
<p><i>Assessment, Detailed Design, Contract Documentation and Construction Monitoring for the Partial Reconstruction of National Road R511, Section 3 from Beestekraal (km 36.00) to NW/Limpopo Border (km 78.00)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R300 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2016 - 2020</p>	
<p><i>Assessment, Detailed Design, Contract Documentation and Construction Monitoring for the Improvement of National Road R510 Sections 1 and 2 from NW/LP Border (km 72.00) to Bierspruit (km 6.40) (27.2 km in length)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R300 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2016 - Current</p>	
<p><i>Restoration of Selected Pavement Areas followed by Surfacing of National Road N17 Section 5 from km 85 to Oshoek (km 122.7)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R140 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2015 - 2024</p>	
<p><i>Assessment, Detailed Design, Contract Documentation and Monitoring of the Repair and Reseal of National Road R503 Section 1 from Klerksdorp (km 0.00) to Hartebeesfontein (km 22.00)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R94 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2015 - 2019</p>	
<p><i>Repair and Resurfacing of National Road R40 Section 7 from Mica to Phalaborwa</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R88 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2017 - 2019</p>	
<p><i>N4 Toll Highway. Hectorspruit to Komatipoort Maputo Development Corridor (MDC) 15A (N4-8X)</i></p> <p>Client: Trans African Concessions (TRAC) Value: R300m Service: Detail Design, Tender Documentation & Construction Monitoring Date: 2016 - 2017</p>	

<p><i>The Rehabilitation of the N3 Toll Road:</i> Part 1: Between Van Reenen and Blackspruit (Highway Section 12XB and 13X) (24 km) Part 2: Between Blackspruit and Harrismith South I/C (Highway Section 14XA) (5,1 km) Part 3: Pavement Maintenance (N3-6X Van Reenens Pass)</p> <p>Client: N3 Toll Concessions (Pty) Ltd. Value: R160 Million Service: Detail Design, Tender Documentation & Construction Monitoring Date: 2015 - 2017</p>	
<p><i>Professional Structural Engineering Services for Various Projects in Tshwane: Wonderboom Intermodel Facility</i></p> <p>Client: City of Tshwane / Nako Iliso Value: R200 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2014 - 2023</p>	
<p><i>Rehabilitation of the N3 Toll Road: 1. Between Blackspruit and 42nd Hill (13.6 km) and 2. Between 42nd Hill and Warden North Interchange (50 km)</i></p> <p>Client: N3 Toll Concessions (Pty) Ltd. Value: R376 Million Service: Detail Design, Tender Documentation & Construction Monitoring Date: 2014 - 2017</p>	
<p><i>The Rehabilitation and Upgrading of the N4 Maputo Development Corridor (MDC): Section 6(E): N4-6X from km 23.00 to km 43.30 and N4-7X from km 0.00 to km 22.00</i></p> <p>Client: Trans African Concessions (TRAC) Value: R185 Million Service: Detail Design, Tender Documentation & Construction Monitoring Date: 2017 - 2018</p>	
<p><i>Upgrading of Kroonstad Traffic Control Centre on National Routes 1, Section 17</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R92 Million Service: Detail Design, Tender Documentation, Construction Monitoring Date: 2017 - 2019</p>	
<p><i>Upgrading and/or Rehabilitation of N4 Maputo Development Corridor (MDC) Section 4(D) and 4(E) between Arnot and Wonderfontein</i></p> <p>Client: Trans African Concessions (TRAC) Value: R403 Million Service: Detail Design, Tender Documentation & Construction Monitoring Date: 2014 - 2018</p>	
<p><i>Design of Permanent Access Road and Remedying of any Defects in the Work for the Booyensdal South Central Complex Implementation Project</i></p> <p>Client: DRA Mining (Pty) Ltd. Value: R140 Million Service: Feasibility Study, Detail Design & Construction Monitoring Date: 2015 - 2019</p>	
<p><i>Construction of Schools in the Free State Province under the Accelerated Schools Infrastructure Delivery Initiative (ASIDI) Programme (5 Schools)</i></p> <p>Client: DBSA and Department of Basic Education Value: R56 Million Service: Detail Planning, Procurement Support & Construction Monitoring Date: 2013 - 2019</p>	

<p><i>GFIP: National Route 1, Section 20 from Misgund I/C (km 6,4) to Golden Highway (km 9,2)</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R155 Million Service: Detail Design, Tender Documentation & Construction Monitoring Date: 2011-2012</p>	
<p><i>The Gauteng Freeway Improvement Project (GFIP) National Route N1-20 from Golden Highway to 14th Avenue and Route N12-18 from Diepkloof to Uncle Charlie's</i></p> <p>Client: SA National Roads Agency SOC Limited Value: R1400 Million Service: Preliminary Design, Detail Design & Construction Monitoring Date: 2008 - 2010</p>	
<p><i>Gautrain Rapid Rail Link: Package DD5A: Depots and Package DD5B: Civil Works</i></p> <p>Client: Bombela Civils Joint Venture (Pty) Ltd. Value: DD5A: R1100 Million; DD5B: R1200 Million Service: Preliminary & Detail Design Date: 2006 - 2010</p>	
<p><i>Programme Management of 10 Stadiums for 2010 FIFA Soccer World Cup</i></p> <p>Client: Department of Sport and Recreation / National Treasury Value: R16,8 Billion Service: Programme Management Date: 2006 - 2010</p>	

Africa Projects



Botswana

Design and Supervision of Roads in Botswana:

- Design and Supervision of Internal Roads – Molepolole (26,78 km)
- Design of Stormwater Drainage Master Plan of Thamaga Village (~8000ha)
- Design and Review of Internal Roads – Mogoditshane (25,972km)
- Design of Molopolole Bypass Road (28km)
- Design, Construction and Supervision of three Interchanges in Gaborone
- Design and Supervision of the Letlhakeng - Khudumelapye - Salajwe - Kaudwane Road (102km and 5,2km access roads)

Client: DEVMCO Botswana
 Service: Design and Supervision
 Date: November 2023 - 2025

Zambia / DRC: Design and Construction of the Kasomeno to Mwenda Toll Road (KMTR) in Zambia and DRC- Owners Engineer to GED Africa (185-km single carriage roadway, 350 metre Cable-Stayed Bridge and two Border Pots)

Client: GED Africa Ltd
 Value: ±500 Million USD
 Service: Preliminary Design Review
 Date: 2020

Mozambique: The Rehabilitation and upgrading of MDC16, EN4 Section 1: km 0,0 to km 39,79, from Reesano Garca Border Post to Moamba

Client: Trans African Concessions (TRAC)
 Value: R335 Million
 Service: Assessment, Prelim Design, Detail Design
 Date: 2020-2021

Ghana: Owners Engineer: Tema Arterial Roads Project

Client: A P Moller Capital
 Value: 141 Million USD
 Service: Preliminary Design
 Date: 2019 - 2021

Guinea: Novatel, Bel Air & Kankan Hotel

Client: SNA Africa SAS - Guinea
 Value: 150 Million USD
 Service: Detail Design
 Date: 2019-2022

<p><i>Guinea: Toll Feasibility Study: N1 Toll Road: Conakry to Kindia (132 km)</i></p> <p>Client: Department of Public Works, Government of Republic of Guinea Value: 1,15 Billion USD Service: Feasibility Study Date: 2019-2021</p>
<p><i>Guinea: Upgrading and Geometric Improvement of N7 between Mandiana and Mali Border (56 km)</i></p> <p>Client: Guiter SA Construction Value: 84 Million USD Service: Detail Design Date: 2019-2022</p>
<p><i>Guinea: Upgrading of existing gravel road to surfaced road between Tintioule and Oumale</i></p> <p>Client: Guiter SA Construction Value: R10 Million Service: Detail Design Date: 2019-2022</p>
<p><i>Guinea: Upgrading and Geometric Improvement of N1 between Kankan and Kissigoudou (185 km)</i></p> <p>Client: Guiter SA Construction Value: 278 Million USD Service: Detail Design Date: 2019-2022</p>
<p><i>Guinea: Upgrading and Geometric Improvement of N1 between Kankan and Kerouane (120 km)</i></p> <p>Client: Guiter SA Construction Value: 0,15 Million USD Service: Survey Date: 2019</p>
<p><i>Kenya: Detail Design of the Lamu-Garissa-Isiolo Toll Road in Kenya</i></p> <p>Client: Raubex Construction & WBHO Joint Venture Value: 800 Million USD Service: Review, Preliminary Design, Detail Design and Construction Monitoring Date: 2018</p>
<p><i>Mozambique: Traffic Capacity Upgrade Investigations of MDC Sections 19, 20 and Harbour Road between Matola and 16th June Circle (EN4 km 40,85 to 51,82)</i></p> <p>Client: Trans African Concessions (TRAC) Value: 21,5 Million USD Service: Feasibility, Preliminary Design & Detail Design Date: 2013-2019</p>
<p><i>Namibia: Widening of 3 River Bridges on the MR76 Bridge between Khoriscas and Kamanjab</i></p> <p>Client: Tulipamwe Value: 2,5 Million USD Service: Detail Design, Calculations & Drawings Date: 2018</p>
<p><i>Kenya: East Africa Trade and Transport Facilitation Project (EATTFP): Consultancy Services for Engineering Design and Construction Supervision of the Mariakani-Athi River Axle Load Control Stations</i></p> <p>Client: Kenya National Highways Authority (KenHA), Nairobi, Kenya Value: 12,5 Million USD Service: Detail Design, Construction Monitoring Date: 2015-2018</p>

Kenya: Consulting Services for Design Review and Construction Supervision of Three (3) Interchanges along A104 at Nyahururu Turnoff, Njoro Turnoff and Mau Summit

Client: Kenya National Highways Authority (KenHA), Nairobi, Kenya
Value: 28 Million USD
Service: Design Review, Construction Monitoring
Date: 2015-2018

Zambia: Consulting Services for the Feasibility Study and Identification of Locations for the Construction of Fixed Electronic Weigh Bridges on the Core Road Network in Zambia

Client: Zambia Roads Development Agency (RDA)
Value: 0,6 Million USD
Service: Detail Design
Date: 2015-2024

Zambia: Upgrading of Road 56 from Gravel to Surfaced Standards: Chinsali – Safwa

Client: Raubex
Value: 71 Million USD
Service: Detail Design
Date: 2017

Zambia: Road 56 Mfuwe-Nabwalya Zambia: Single Carriageway Surfaced Road

Client: Raubex
Value: 86 Million USD
Service: Detail Design
Date: 2017

Mozambique: NCALA Railway Corridor Project Mozambique

Client: Aurecon
Value: 14,5 Million USD
Service: Project Management & Storm Water Drainage Design Reviews
Date: 2012

Namibia: Kranzberg to Tsumeb Railway Line: Inspection of Existing Rail Bridges - Namibian Railways

Client: Windhoek Consulting Engineers
Value: 0,1 Million USD
Service: Bridge Inspections
Date: 2011-2012

Joint Ventures

The company has successfully participated in joint venture arrangements over the last 20 years on major projects.

The major projects referred to are as follows:

- Maputo Development Corridor (SNA lead consultant)
- Gautrain (SNA Lead Consultant with other engineering disciplines)
- Gauteng Freeway Improvement Project (GFIP) (Joint Venture with other Engineering Disciplines)
- Road Designs on the N1 and N2 (SNA as lead consultant – Bid Phase)
- Mauritius Toll Road Decongestion Programme (JV with other Engineering disciplines – Bid Phase)

SNA has an established relationship with engineering companies operating in most of the other engineering disciplines (electrical, mechanical, traffic & transportation, etc.) for use if and when required.

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