



WE PROVIDE  
**FUTURE SOLUTIONS**  
NOW

COMPANY  
**PROFILE**





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# THE COMPANY

## ABOUT US

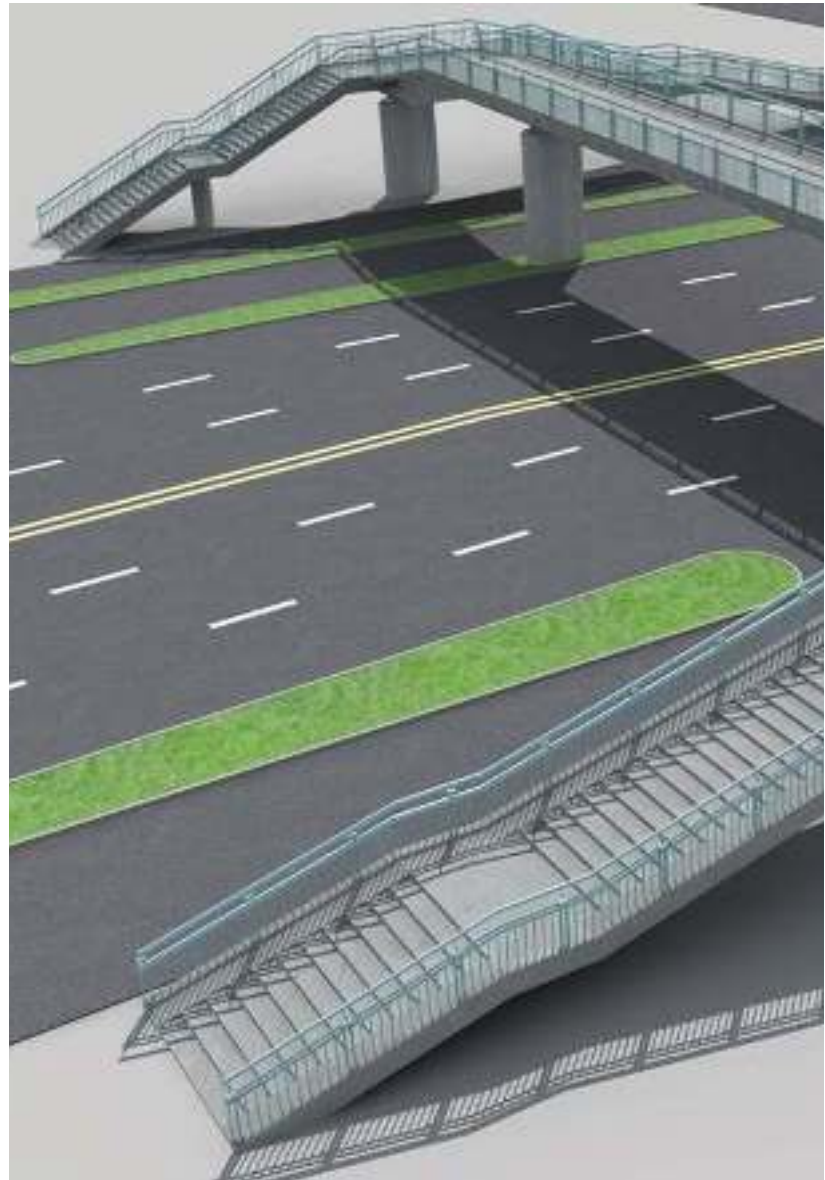
**Advanced Engineering Solutions Ltd** is a Tanzania Engineering firm which was established in 2008; in 2012 **AES** was registered as consulting firm in Civil Engineering with Head office in Mikocheni Area, Dar es salaam, Tanzania.

**AES** Organization is structured so as to service better our growing number of our client. Our operation system is updated regularly so as to improve our services and to ensure that our customers are getting the best out of our services.

**AES** operates in various countries mainly as consultant drawing on the integrated global experience of the firm's and personnel.

**AES** provides multidisciplinary consultancy services for all stages of a project cycle from preparation and feasibility study to construction, operation and maintenance and capacity building. Our experience covers wide range of topographical, climatic, cultural and working environments. We are able to mobilise quickly and work efficiently in difficult circumstances with limited facilities.

Our combination of specialist staff expertise and development project experience have been proved appropriate in all area of east Africa i.e **Tanzania, Kenya ,Uganda, Rwanda** and **Burundi**. In order to ensure that our projects are executed on time, our operation is structured as shown in flow chart below.







# OUR CORE VALUES

Our Values define who we are. They are the fundamental beliefs of our global organization. They guide our actions and behavior. They influence the way we work with each other – and the way we serve our clients. Every day, each one of us makes choices and decisions that directly affect the way we experience each other and the way our clients experience us. Our values give us confidence that we are using the same principles to help us make these decisions throughout our organization.

## INTEGRITY

Integrity always comes first. Honesty, truthfulness and sincerity are values we hold at the forefront. We inspire trust in each other and our clients by saying that we mean, matching our behaviors to our words and taking responsibility for our actions. We are always fair and ethical even in the most difficult situations.

## LOYALTY

At AES, We build positive, long-term relationships with our client, partners, vendors and colleagues that are built on trust, respect and collaboration.

## COMMITMENT

We never let down any of our clients and partners. We are committed to satisfying the client by always being there. We maintain close communication with all of our clients throughout the whole project life.

## ROBUSTNESS

**AES** is fastest growing consultancy firm in Tanzania. With a life less than a decade, **AES** is among the elite consultancies in Tanzania delivering quality engineering services which brings solutions to the community.



## BURSARIES

During the year 2017 **AES** started awarding bursaries for students studying civil engineering in various engineering colleges in **Tanzania**. Three best students are sponsored each year and/or awarded every year on annual engineers Day organized by Engineers Registration Board of Tanzania. Every year, **AES** provides bursary for one female civil engineering student from any selected higher learning institution in Tanzania.

## COURSES

To maintain technical expertise with current technology and engineering methods **AES** sends her staff on various courses throughout the year. We have a special program to make sure that all senior staffs are possessing a post graduate qualification. Each year from 2016 two staff are sponsored for masters program.

We believe that by enabling our staff to increase their knowledge and skills, they will easily achieve their full potential in the work place.

## IN-SERVICE TRAINING

Throughout the year, technicians and engineers are given an opportunity to complete their in service training and practical training for students. These junior Technicians and Engineer are normally taught by some of **AES** most experienced staff members to give their carrier a jump start.

## ENTERPRISE DEVELOPMENT

**AES** is supporting establishment of small enterprise.

## SOCIAL AND ECONOMIC DEVELOPMENT

At **AES**, We invest in the future of Tanzania children. **AES** is paying school fees of not less than 5 children from the disadvantaged backgrounds.

## COOPERATE SOCIAL RESPONSIBILITY

Our corporate social responsibility program covers a wide spectrum of initiatives that includes annual donation to various institutions.



## OUR GROWTH

Established in 2012, the overall turnover of AES entirely related to engineering increased by 666% approached 800 million TZS by the end of the year 2013. In 2014, the project turnover was surpassed by 50% recorded an annual turnover of 2.1 billion which is equivalent to 173% increase in annual turnover. In 2015 the turnover increased by 5%, while the year 2016, the annual turnover increased by 46%, in 2017 the annual turnover rose to 5.1 billion which translated to 75% increase. In 2018 annual turnover decreased to 4.6 billion which is equivalent to a decrease of 9%. Apart from a tough and competitive condition in reference markets in 2019 AES Annual turnover increased to 5.1 billion which equals to the increase of 11% from the previous year. Apart from all of that AES still maintained an exponential growth turnover level, delivered positive net cash flow and produced increasing operating net profit. The project turnover in 2020/2021 is expected to be in excess of 6.1 billion [21% increase].



## TEAM

People are our most valuable asset. From the engineers to architects and from international expert to local experts, **AES** offers its clients a competitive team of experts passionate and driven to make the difference. More than 85% of our professionals hold university degrees in relevant fields of the company activities. AES looks with continuity at the latest learning, updating and training opportunities for her workers, devoting with excitement and belief part of the income for the implementation of training and research program on the core business of the company.



# OUR SERVICES

AES manages and implements its engineering works with highly experienced and qualified team of employees. We have been providing advanced Engineering solutions to our clients whereby we analyse the design and recommend the most economical without compromising the quality. The various activities undertaken by the firm are divided into the following department:

## 01

### HIGHWAY DESIGN

- a) Engineering survey
- b) Geometrical design of highway
- c) Highway capacity analysis
- d) Traffic analysis
- e) Traffic studies

## 02

### SURVEYING

- a) Reconnaissance survey - Walk through/inventory
- b) Establishment of ground control points
- c) Alignment survey - exploration of alternative alignment
- d) Engineering survey - roads, reservoirs, canals, water supply and sewerage projects
- e) Topographical survey – collection of ground features/grid level
- f) Catchment survey – ridge/valley contours
- g) Cadastral survey – Property lines and lane areas
- h) Final location survey – alignment stakeout and resetting
- g) Hydrographic surveying

## 03

### PAVEMENT DESIGN AND ANALYSIS

- a) Traffic analysis
- b) Mechanistic pavement design
- c) Pavement residual life analysis
- d) Overlay design
- e) DCP testing and analysis
- f) Benkelman beam
- g) Falling weight Deflect meter [FWD]





## 04 FORENSIC INVESTIGATION

- a) Flexible pavement failure investigation
- b) Asphalt concrete failure investigation
- c) Pavement distress investigation



## 05 VALUE ENGINEERING

- a) Critical study of the design to remove unnecessary cost
- b) Life cycle cost analysis
- c) Evaluation of function of the designed structure against the value



## 06 CONSTRUCTION CLAIM

- a) Extension of time analysis
- b) Retrospective and As-Built But-For Schedule Delay analysis (ABBF)
- c) Quantum computation



## 07

- a) Environmental and social Impact Assessment (ESIA)
- b) Environmental and Social Management Plan (ESMP)
- c) Resettlement Action Plan (RAP)
- d) Environmental Impact Statement (EIS)



## 08

### GEOTECHNICAL INVESTIGATION

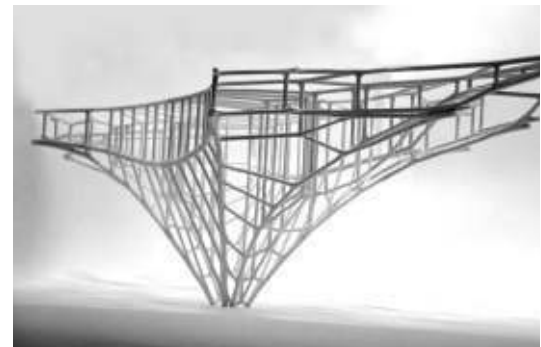
- a) Geotechnical analysis
- b) Geological analysis
- c) Slope stability analysis
- d) Embankment settlement analysis
- e) Pile design



## 09

### HYDRAULIC & STRUCTURE DESIGN

- a) Bridge design
- b) Building design
- c) Culvert design
- d) Hydraulic analysis



## 10

### WATER SUPPLY AND SANITATION ENGINEERING

- a) planning, construction and management for the abstraction, conveyance, storage and drainage of raw, potable, treated and waste water.





The execution of the projects is carried out in  
**Three Major Stages**  
as shown in figure below



**01** STEP  
ONE

- Inception



**02** STEP  
TWO

- Feasibility study
- Preliminary design

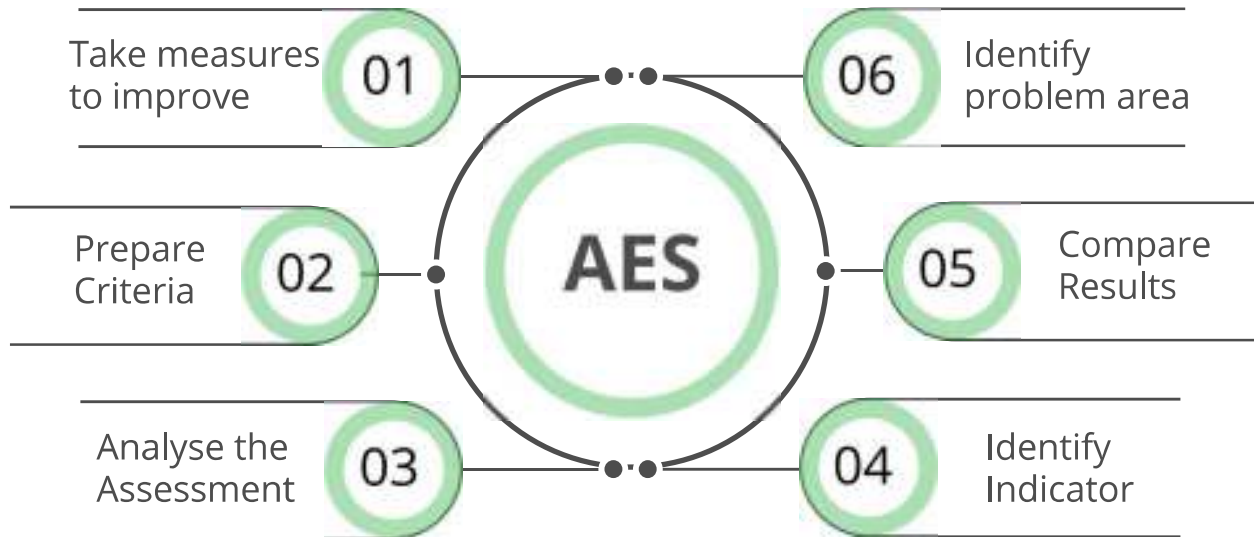


**03** STEP  
THREE

- Detailed design  
and tender documents
- Supervision

## Quality Control

The **AES** management system is focused on quality assurance, in line with Norm EN ISO 9000, This system enables the firm to fulfill the organizational responsibilities and measure in everyday work. The quality system is constantly updated and adopted to the requirements and circumstances of the project underway.



## Quality assurance system managed by AES

### A. QUALITY MANUAL

AES has a quality manual which represents the higher level of quality system documents. It determines measures and responsibilities to be observed in each project covering study, design, technical assistance, training and other consultancy services. The manual is also used to inform the client as well as to extend the quality system to the partners of joint ventures or sub contract agreement of which member of the consortium is part.

### B. WORKING PROCEDURES AND INSTRUCTIONS

They represent the second level of the documents of the quality system. On one side ,They preside over the detailed planning of project service, highlighting the critical paths. On the other side ,They contain the detailed description of the project management rules. In particular, they aim at achieving the expected results trough proposer management of the project cycle, identifying likely risks and related hypothesis for quality assurance.

### C. WORKING INSTRUMENTS

At the third level of the quality system, the working instrument makes sure that requirements are satisfied: since they are carefully selected based on the objectives to be achieved and the ancillary methodologies.





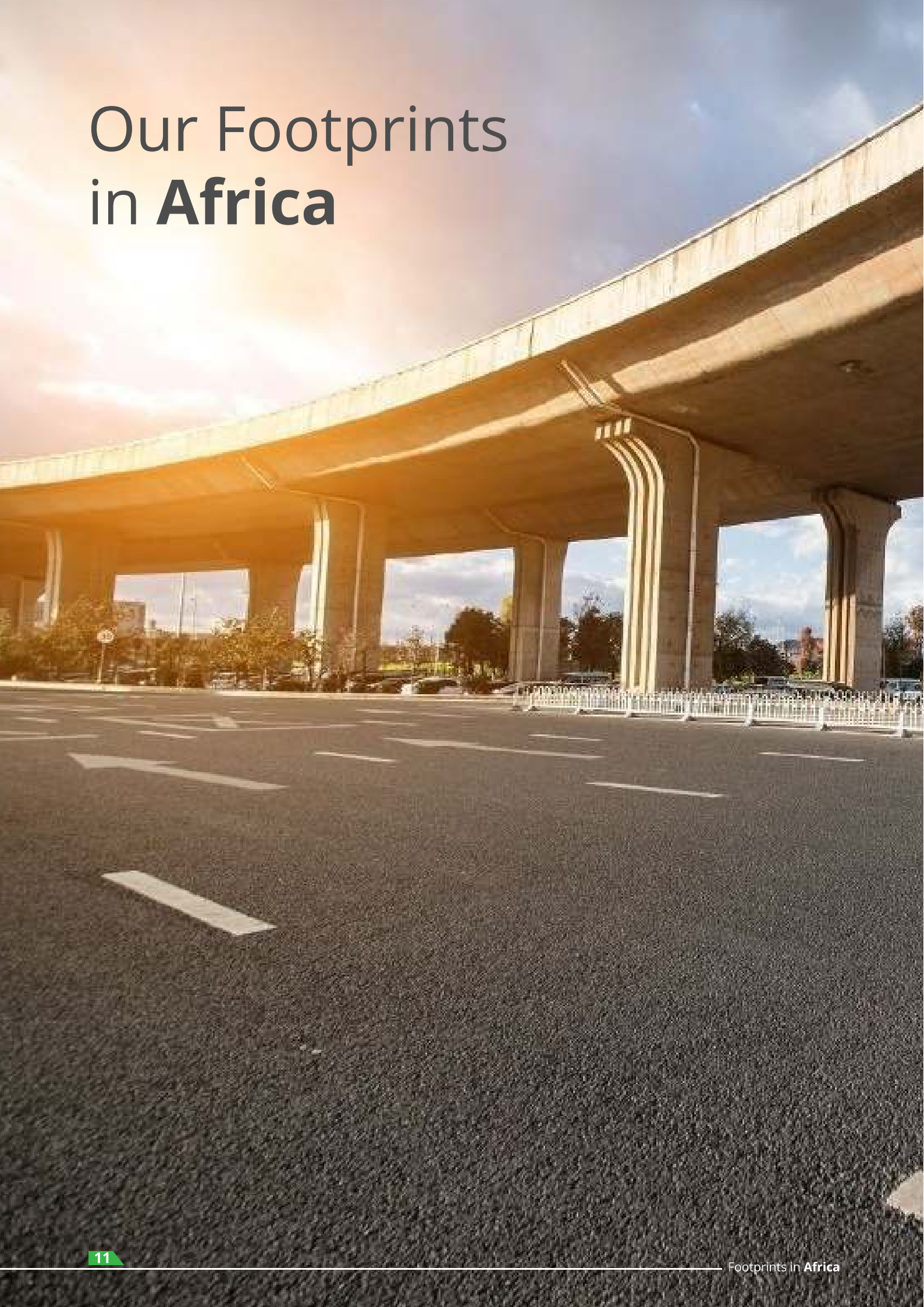
Our Footprints are everywhere in **Tanzania**

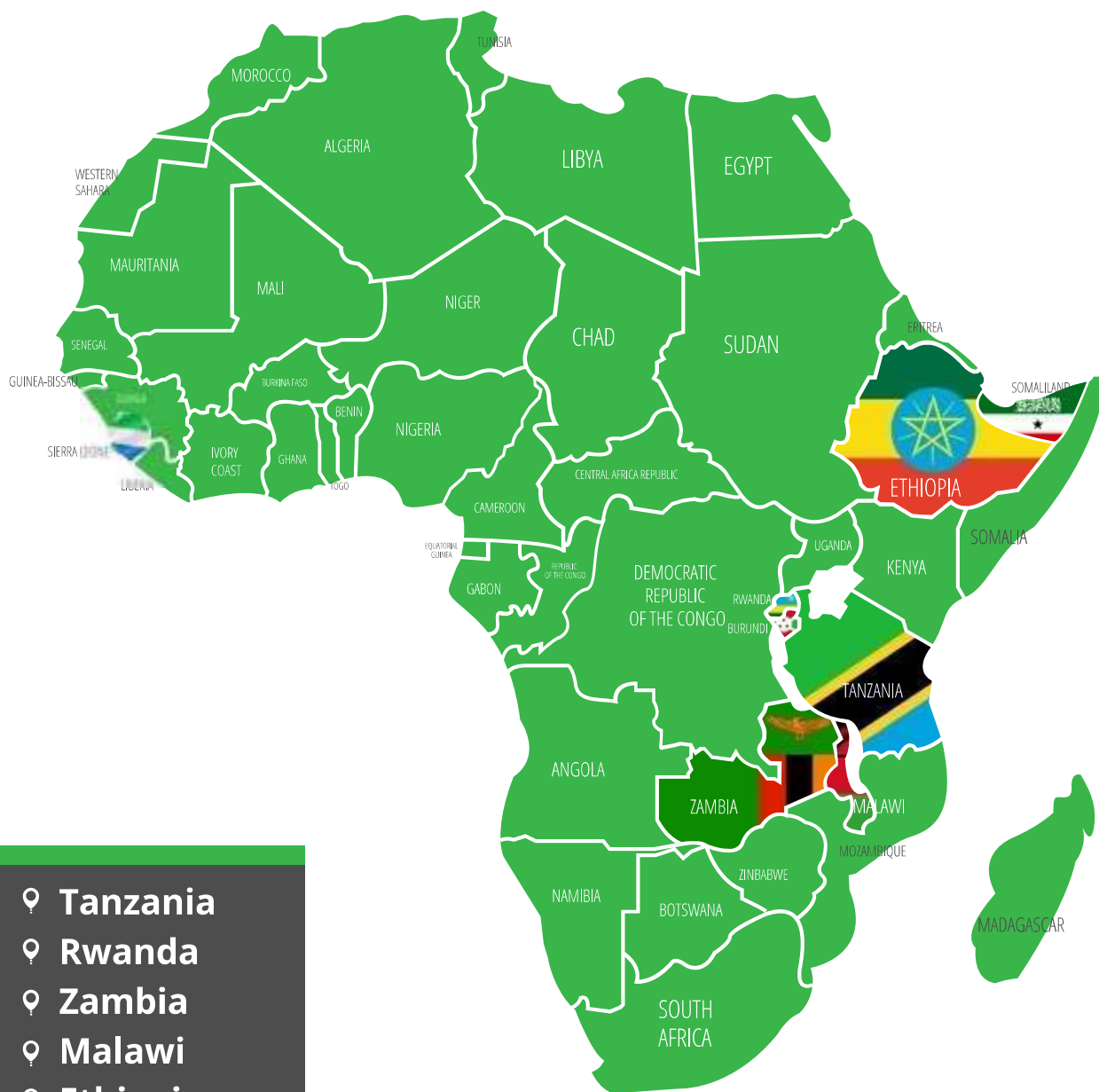
To maintain the high standard of professional services it offers, **AES** employs highly qualified personnel, all members of their respective societies or institutes. There are permanent staff who are operating at the headquarter office in Dar es salaam, Tanzania. **AES** also employs staff on ad hoc basis ranging from 100 -150 depending on the number of the projects in hand.

regional and cultural problems, modus operandi of different ministries in operation of projects comes handy to the project's management and team members: this makes the operation and execution of the project in Tanzania to be easy and tenable. To ensure impartiality to its client professional status, AES Strongly adheres to the engineering code of ethics and maintains an independent status

During the period of growth, **AES** broadened its range of professional services to meet the growing demand. The multi-disciplined project teams comprising of more than 100 professionals allow AES to organize and manage from study stage straight through design and construction to satisfactory handing-over, **AES** is familiar with local laws and regulation, material resources,

# Our Footprints in **Africa**





- 📍 Tanzania
- 📍 Rwanda
- 📍 Zambia
- 📍 Malawi
- 📍 Ethiopia
- 📍 Somaliland
- 📍 Sierra Leone





## Associative Firms

In order to supplement the firm's internal resources and to maintain contact with state -of- the-art development in all fields, AES maintains a close association with international professional firms with whom it cooperates from time to time, depending on the nature of the project and the specialized expertise it may require. Advanced Engineering solutions have successfully worked with several international firms as shown in the succeeding sections



SAI  
INDIA

1. Detailed Engineering design of Mabatini Flyover Bridge and addition of lane [Nata-Buzuruga].



TANROADS  
MWANZA



AARVEE  
INDIA

2. Supervision of construction of Kilombero Bridge [384 m] and its approach roads [9.142 Km] along Ifakara – Mahenge Road.  
3. Supervision of upgrading of Sumbawanga – Namanyere – Mpanda [245 Km] to bitumen standard, packages 4: Sitalike – Mpanda section [36.9 Km]  
4. Supervision of construction works for upgrading Usangara – Kisesa [Mwanza bypass] Road [16 Km] to bitumen standard  
5. Consultancy services for supervision of upgrading of Tabora – Koga – Mpanda Road [356 Km] to bitumen standard: Lot 1: Tabora – Sikonge [Usesula] Section [30 Km]



TANROADS  
HQ



TECHNIPLAN  
ITALY

6. Detailed engineering design and preparation of tender documents for service Roads to Bitumen standard, Traffic and Street Lights, and Pedestrian Bridge along new constructed road of Mwenge – Tegeta along new Bagamoyo Road [12.9 Km]



TANROADS  
DSM



**ACE  
EGYPT**

7. Consultancy Service for supervision services for construction supervision of passenger terminal complex and Associated works & facilities at Julius Nyerere International Airport - Tanzania



**TAA**



**HAMZA  
ASSOCIATES  
EGYPT**

8. Consultancy services for carrying out economic Evaluation, Preliminary Design and detailed Engineering design of Ubungo intersection.



**TANROADS  
HQ**



**LEA  
ASSOCIATES  
INDIA**

9. Consultancy services for detailed design and preparation of tender documents for assorted accident 'black spots' interventions measures and supervision of improvement of assorted accident 'black spots' along Dar es salaam corridor



**TANROADS  
HQ**

10. Consultancy services for the design review and construction supervision of upgrading of Tabora - Kaoga - Mpanda Road [363 Km] to Bitumen standard; Lot 1; Usesula - Komanga Road section [108 Km] and Sikonge spur 2.21 Km & Sikonge Town section 7.36 Km



**STUDI  
INTERNATIONAL  
TUNISIA**

11. Review of feasibility study and detailed Engineering design of Msalato airport.



**TAA**



**M/S KHATIB & ALAMI  
CONSULTING ENGINEERS  
OFF SHORE  
S.A.L - LEBANON**

12. Consultancy services for Supervision of Rehabilitation and upgrading of Kigoma and Tabora Airports



**TAA**



**ADVANCE  
CONSTRUCTION  
CENTRE - EGYPT**

13. Consultancy services for carrying out feasibility study, Environmental and social impact Assessment, Detailed Engineering Design and preparation of tender documents for upgrading of some - Kisiwani - Mkombozi road (100.5 Km) to bitumen standard.



**TANROADS  
HQ**



- M/S KHATIB & ALAMI CONSULTING ENGINEERS OFF SHORE S.A.L - LEBANON
- BARSYL BALAJI RAILROAD SYSTEMS LIMITED - INDIA

14. Consultancy services for provision of experts to RAHCO to Reinforce the implementation of the Tanzania Intermodal and Rail Development Project [TIRP]



**RELI ASSETS  
HOLDING  
COMPANY  
(RAHCO)**



**M/S ILSHIN  
ENGINEERS &  
CONSULTANTS**

15. Consultancy services for supervision of construction of new Wami Bridge (513.5m) and its Approach Roads (4.325 Km)



**TANROADS  
HQ**





**M/S UMAR  
MUNSHI ASSOCIATES  
PAKISTAN**

16. Consultancy services for feasibility study, preliminary design, Environmental and social impact assessment, Detailed Engineering design and preparation of tender documents for construction of a Mtera Dam and the Babati town by pass (15.5 Km).



**TANROADS  
HQ**



- **KPMG  
ADVISORY LTD**
- **BARSYL  
BALAJI RAILROAD  
SYSTEMS LIMITED  
INDIA**

17. Consultancy services for provision of transaction advisory services for carrying out review of preliminary design and feasibility study, preparation of tender documents, tender Administration and facilitation of financial close.  
Lot No 1: Mtwara to Amerlia (Manda) Bay via songea with spurs to liganga and mchuchuma Railways projects under Public and Private Partnership (PPP)



**TANZANIA  
RAILWAY  
CORPORATION**



- **ARDANUY**
- **SOOSUNG**
- **ICT LTD**

18. Consultancy services for provision of consultancy services for Feasibility study and preliminary design for Dodoma capital city commuter trains services.



**TANZANIA  
RAILWAY  
CORPORATION**



**DAR AL - HANDASH  
CONSULTANT  
(EGYPT) LIMITED**

19. Consultancy services for carrying out Feasibility study, Detailed Engineering Design and preparation of tender documents for Pemba Airport and conduct/Carry out Zanzibar Airport master plan and land use plan for Abeid Aman Karume International Airport (AAKIA)



**MINISTRY OF  
INFRASTRUCTURE,  
COMMUNICATIONS  
AND  
TRANSPORTATION**



**HOWARD  
HUMPHREYS**

20.Consultancy services for supervision of Rehabilitation and upgrading of Songea Airport.



**TANROADS**



**TEKNICON  
LIMITED**

21.Consultancy services for carrying out Feasibility study ,detailed Engineering design and preparation of tender documents for upgrading of Wenda – Mgama Road (19 Km) IN Iringa District- Ihemi Cluster and Mtili – Ifwagi-mkuta Road (14 Km) In Mufindi District – Ihemi Cluster to Appropriate Sealing Standard.

22.Consultancy services for Feasibility study, Environmental & social impact Assessment [Esia], Detailed Engineering design and preparation of tender documents for upgrading of matomondo – mlale Road (23 Km) In Songea District to Bitumen standard



**TANZANIA  
RURAL & URBAN  
ROADS AGENCY**



**TEKNICON  
LIMITED**

23.Consultancy services for Feasibility study, Environmental and social impact Assessment,Detailed Engineering design and preparation of tender documents for construction of Kalambo Bridge 80 meter along Mtutumbe jct - Mtutumbe – Ksitu –Nondo Road.



**TANROADS  
RUKWA**



**LIDWALA,  
SPECIALIST  
SOLUTION**

24.Consultancy services for carrying out Feasibility study, Detailed Engineering design and preparation of tender document for upgrading to double surface dressing of Magu – Bukwimba – Ngudu – Hungumalwa Road [71 Km] in Mwanza



**TANROADS  
MWANZA**



**AV  
CONSULT**

25. Consulting Services for Design and Supervision of Construction of Storage Facilities.



**MINISTRY OF  
AGRICULTURE  
(TANIPAC)**



**GB  
GROUP**

26. Consultancy Services For Economic Study Environmental & Social Impact Assessment, Detailed Engineering Design & Preparation Of Tender Document For Singida Bypass Road (46.0 Km) To Be Financed Through Development Roads Fund.



**TANROADS  
SINGIDA**



**BRL**

27. Feasibility and environmental and social study of Shinyanga water and sanitation project



**SHUWASA**



**ETHIO INFRA  
ENGINEERING PLC  
AND TACT  
ENGINEERING  
GROUP PLC**

28. Consulting Services for The Construction Supervision of The Rehabilitation of The Kafue Mazabuka Road (T1) In Southern Province – Lot 2.



**ROAD  
DEVELOPMENT  
AGENCY  
(ZAMBIA)**



**TACT  
ENGINEERING  
GROUP PLC**

29. Consulting services for planning, Detail Engineering Design and bidding Document preparation for pedestrian crossing



**ADDIS ABABA  
CITY ROADS  
AUTHORITY**





**SPACE CONSULT  
ARCHITECTS (T) LTD**

30.Provision of construction supervision consultancy services for technical sports centers in Kigamboni, Dar es salaam and in Mryanjani, Tanga city.



**TANZANIA  
FOOTBALL  
FEDERATION**



**KANDOLI  
CONSULTING  
ENGINEERS**

31.Consultancy services to undertake road sector design  
32.Consultancy services to undertake road sector studies



**ROADS  
AUTHORITY  
MALAWI**



**PAI  
ENGINEERING  
COMPANY**

33,Consultancy Services For Feasibility Study, Environmental And Social Impact Assessment, Detailed Engineering Design, And Preparation Of Tender Documents For Upgrading Of The Following Roads To Bitumen Standard In Mwanza Region:  
Lot 1: Mkuyuni – Mahina - Nyakato Road (10 Km)  
And Lot 2: Nyakato Veta - Buswelu – Mhonze Road (14.2 Km).



**TANROADS  
MWANZA**



**G-PES IN JV  
WITH KAPSEL**

34.Consultancy Services for the Technical Audit and Road Safety on North -South Corridor



**RTDA**



**HOWARD  
CONSULTING LTD**

35.Consultancy Services For Feasibility Study, Detailed Engineering Design And Preparation Of Tender Documents For Upgrading Of Bariadi – Kisesa – Mwandoya – Ngoboko – Mwanhuzi – Sibiti – Mkalama – Iguguno Road: Mkalama – Gumanga – Nduguti – Iguguno Section (89 Km) To Bitumen Standard



**TANROADS**



**INTERCONTINENTAL  
CONSULTANTS AND  
TECHNOCRATS PVT.  
LTD**

36.Consultancy Services For Economic Study, Detailed Engineering Design, Environmental & Social Impact Assessment And Preparation Of Tender Documents For Rehabilitation Of Singida - Shelul Road Section (110 Km).



**TANROADS**



**EXTREME  
ENGINEERING  
SOLUTIONS  
LTD**

37.Consultancy services for Feasibility Study, Detailed Engineering Design and Preparation of Tender Documents for Upgrading of Isongole II – Kasumulu – Ipyana – Katumbasongwe Regional Road 114.67 Km Including Ndembo – Isoko Spur Road 6 Km to Bitumen Standard.



**TANROADS**



**BOTEK  
BOSPHORUS  
TECHNICAL**

38.Consultancy Services For Feasibility Study, Detailed Engineering Design, Environmental & Social Impact Assessment And Preparation Of Bidding Documents For Upgrading Of Singida Urban-Ilongero - Haydom Road (93.3 Km) To Bitumen Standard.



**TANROADS**



**KANDOLI  
CONSULTING  
ENGINEERS**

39.Consultancy Services For Detailed And Construction Supervision Of Selected Bridges On Mangochi - Makanjira Road.



**MALAWI  
DEPARTMENT  
OF DISASTER**







Proposed Mtera Bridge

# BANKERS

Advanced Engineering Solutions has accounts in the following banks

»» INTERNATIONAL COMMERCIAL BANK

»» UNITED BANK OF AFRICA (UBA)

»» FIRST NATIONAL BANK (FNB)

»» COOPERATIVES RURAL DEVELOPMENT BANK (CRDB)



## STAFF & ORGANIZATION STRUCTURE

The firm activity over the years has grown into multidisciplinary organization to meet the needs of public and private clients within Tanzania, focusing on project management, engineering, environmental protection, providing innovative solutions in consultancy services and training. Finding innovative solutions is a key part of all services to customers and comes not only from the strong technical base but also from the business-based approach and from the collaborative one.

The **AES** provides services pertaining to consultation investigation, preparation of economic report and technical reports, design, design review, contract administration and supervisions of civil and water works.

**AES** offers its clients the benefits of its advanced technological services in all facets of technical deliverables. Our long-term staffs are assigned to projects taking full account of their familiarity with the specific type of work, their experience in the region or

similar areas and their previous works with other members of the team. Periods between assignments are spent in the head office or one of the regional offices to update individual technical expertise and give feedback to head office on project support.

A very important feature of **AES** is that all management and senior staff have lived and worked in East Africa for a substantial part of their careers. This ensures a real understanding of conditions in the field and adequate language capacities, facilitating effective relationship with project team members.





# OUR TEAM



**GERALD MAREGESI**  
Managing Director



**ONESMO MGOHA**  
Director of Operations



**QUEEN MTOVE**  
HR Manager



**ISAYA SEMUNGULUKA**  
IT Support



**ABRAHAM LOISHIYE**  
Civil & Highway Engineer



**ENG. ALPHA NESTORY**  
Civil & Structural Engineer



**ENG. RAMADHANI NGOMA**  
Head of Engineering



**ENG. SETY NOAH**  
Materials Engineer



**ENG. HAPPINESS PAUL**  
Civil & Structural Engineer



**ENG. DADI SHAHAME**  
Civil & Structural Engineer



**ENG. JOHN PATRICK**  
Civil & Highway Engineer



**ENG. MTANI SILASI**  
Head of Highway Design  
Department



**PATSON SALINGO**  
Topographical Surveyor

---



**ENG. FERDINAND MEELA**  
Head of Structures, Hydrology &  
Geotechnical Engineering  
department

---



**REHEMA BAHANDE**  
Head of Tender Department

---



**GEOL. EMMANUEL MSIRA**  
Geologist

---



**ENG. DORCAS MACHIMU**  
Civil & Structural Engineer

---



**ENG. LINDA NYENZI**  
Civil & Highway Engineer

---



**ENG. ELIA DAUDI**  
Civil & Highway Engineer

---



**ENG. LEONARD DAUDI**  
Civil & Highway Engineer

---



**ENG. ARISTIDIS FELIX**  
Civil & Structural Engineer

---



**ENG. GODFREY KATIMBA**  
Civil & Structural Engineer /  
Claim Expert

---



**ENG. GODFREY JAMES**  
Civil & Structural Engineer

---



**ENG. YASINTA WILBERT**  
Building and Hydraulic  
Structures

---



**DENIS KALANGARI**  
Topographical Surveyor



**ENG. GODFREY MWANJOKA**  
Hydrologist



**ENG. GABRIEL SANGUSANGU**  
Highway Engineer



**ENG. GENIFA KIRIA**  
Structural Engineer



**ENG. HERMAN EMMANUEL**  
Structural Engineer



**ENG. HUMPHREY MACHUME**  
Materials Engineer



**ENG. LUCAS NTAGALA**  
Civil & Highway Engineer



**NOCKTEL MBONDE**  
Topographical Surveyor



**ENG. ULYEGA MAZZUKI**  
Materials Engineer



**ENG. JAFFARY MBARAKA**  
Civil & Structural Engineer

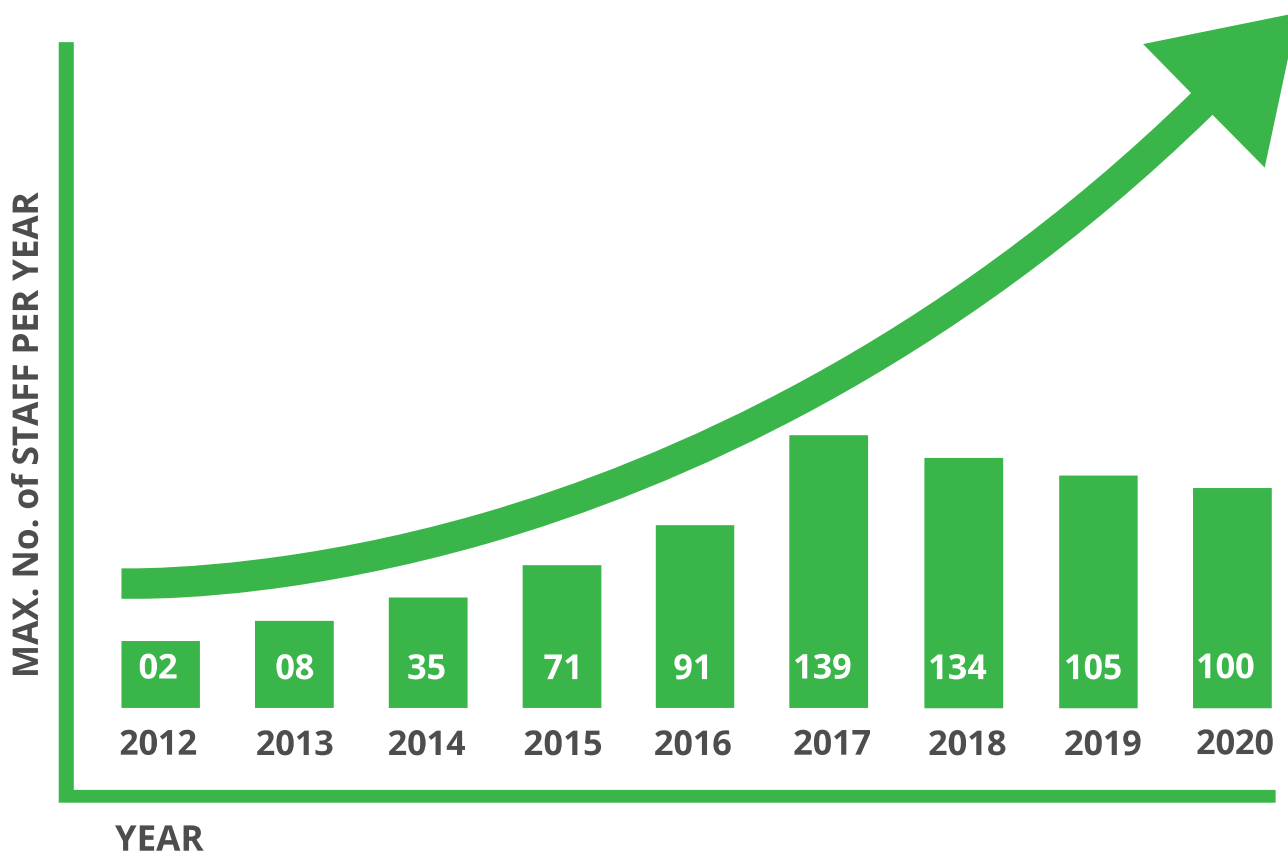


**ENG. JOHN KISUNGE**  
Materials Engineer



**MOHAMMED KIWAMBA**  
Topographical Surveyor





## AES CURRENT ADDRESS (JAN 2018 – TO DATE)

Advanced Engineering Solutions Limited, a limited liability company registered and existing under the laws of Tanzania located at

📍 Plot No. 997 Mikocheni B, O Cocacola Road House No. MKC/MCB/813, Ng'ambo Road Wastaafu No. 10, P.O Box 19074, Dar es Salaam, Tanzania

☎ +255 778 505 011 | +255 779 505 011

✉ info@aesl.co.tz

🌐 www.aesl.co.tz







# Our Projects

**AES** has been involved in several projects in Tanzania; some of the projects are listed below





## Courtesy of **Furahisha Pedestrian Bridge**

- 01 Detailed Engineering Design of **Furahisha** pedestrian bridge and approach road from **Furahisha** to Ghana.
- 02 Detailed engineering design, Environmental and social impact assessment and preparation of tender documents for Kibaha town Roads [11 km]
- 03 Detailed engineering design, environmental study and social impact assessment and preparation of tender documents for Nyaso – Majita Road [2.38 km]
- 04 Supervision of Sumbawanga – Sitalike road project - involved in day to day supervision works and design review of the geometrical design and all drainage structures



## Courtesy Of **Furahisha Pedestrian Bridge**

- 05 Supervision of Usangara – Kisesa [Mwan-za by pass] 16 km – to carryout design review of the alignment and drainage structures along the project.
- 06 Detailed engineering design of Shinyanga – Bubiki road 2 km – involved in traffic analysis, Geotechnical Investigation, Topographical Survey, Geometrical design of the alignment and design of all drainage structures.
- 07 Detailed engineering design of Ubungo intersection [flyover] –carried out topo-graphical survey, materials investigation, traffic analysis.
- 08 Supervision of construction of passenger terminal iii complex and associated works and facilities Julius Nyerere Airport; Carry-ing out supervision works, topographical survey, pavement analysis, electrical work, environmental management plan.



## A Preview of Mwenge - Tegeta Bridges along new Bagamoyo Road



- 09 Detailed engineering design and preparation of tender documents for upgrading the service Roads to bitumen standard, Traffic and street lights and pedestrian bridge along new constructed road of MWENGE – Tegeta Along new Bagamoyo Road [12.9 km]
- 10 Supervision of construction of kilombo bridge [384 m] and its approach Roads [9.142 km] along ifakara – mahenge road. The bridge includes also construction of 102m Relief Bridge
- 11 Supervision of Mabatini flyover [pedestrian] Bridge in Mwanza region – after successfully design of landmark structure in Mwanza – region Tanzania, Advanced engineering solutions has been awarded the contract to supervise the project so as to ensure that the project is constructed as originally designed by **AES**.

- 12 Detailed engineering design of Mabatini flyover bridge and addition of lane (Nata – Buzuruga) in Mwanza region - The project involved geometrical design, topographical survey, establishing ground control points, cross sectioning for establishing the digital terrain model (DTM) materials investigation, hydraulic analysis and preparation for tender documents
- 13 Detailed of engineering design and preparation of tender documents for the upgrading of Kijenge – USA river (Nelson Mandela AIST) road 10.2 km - Arusha region – the project involved geometrical design, topographical survey, establishing ground control points, cross sectioning for establishing the digital terrain model (DTM) material investigation, hydraulic analysis pavement design and preparation of tender documents.
- 14 Supervision construction of investment sub projects in Arusha – municipality under the Tanzania strategic cities project package 1: rehabilitation of CBD roads, construction of bondeni drain and installation of solar powered traffic signal – Advanced Engineering Solutions was contracted by SNC – LAVALIN – MMK project services to provide the backstopping materials engineers – involved in monitoring and approving the contractor's quality assurance plan and quality plan, cement stabilized base, crushed and structural concrete Supervision for rehabilitation of Lindi Municipal
- 15 Roads (6.2 Km) to bituminous standard construction of abattoir and dumpsite fence with associated facilities.





## A Preview of **Mabatini Pedestrian Bridge** in **Mwanza Region**



- 16 Supervision for upgrading of Tabora – koga – Mpanda road (354 km) to bitumen standard; lot 1: Tabora – Sikonge (Usesula) section (30 km)

- 17 Provision of Consultancy service on public private partnerships with case study of the transport sector for the ministry of Finance.



- 18 Consultancy services for detailed design and preparation of tender documents for assorted accident “black spots” interventions measures and supervision of improvement of assorted accident “black spots” along Dar es Salaam corridor.

- 19 Consultancy services for detailed design and preparation of tender documents for assorted accident “black spots” interventions measures and supervision of improvement of assorted accident “black spots” along Dar es salaam corridor.

20 Detailed engineering design of roads for the real estate development at Fumba, Zanzibar

21 Provision of Consultancy services for supervision of road projects (Lot 2: upgrading of 8.17 km roads to bitumen standard) under ULGSP in Tabora Municipality



22 Provision of consultancy services for supervision of road projects (LOT 2: Upgrading of 8.5 Km roads to bitumen standard) under ULGSP in Tabora Municipality.

23 Consultancy services on detailed engineering design and supervision for rehabilitation of selected rural roads in Kongwa district council (69.8 Km) to gravel standard in the financial year 2015/2016



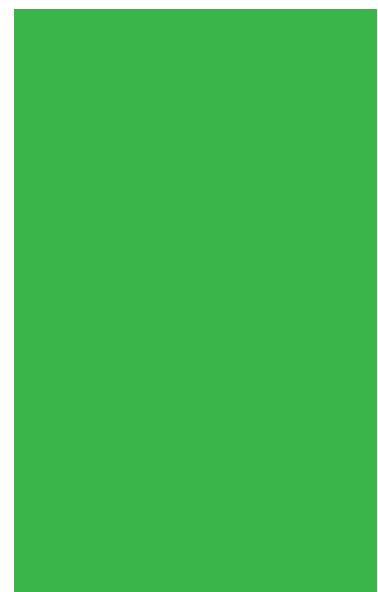
- 24 Consultancy services for the supervision for upgrading of Tabora – Koga – Mpanda road to bitumen standard, Lot 1: Usesula – Komanga section ( 108 km), Sikonge spur 2.21 km & Sikonge town section 7.36 km
- 25 Consultancy services for feasibility study, environmental and social impact assessment, detailed engineering design and preparation of tender documents for upgrading of Mtwara Pachani – Lingusenguse – Nalasi Tunduru road (300 km ) to bitumen standard.
- 26 Consultancy services for supervision of rehabilitation and upgrading of Kigoma Tabora airports
- 27 Consultancy services for feasibility studies review and detailed engineering design of Msalato airport.
- 28 Consultancy services for carrying out detailed engineering design of expansion of Mabatini Box culvert in Mwanza region.
- 29 Provision of consultancy services for supervision of roads upgrading to bitumen standard (8 km) within bukoba municipality.
- 30 Consultancy services for carrying out feasibility study, detailed engineering design and preparation of tender document for upgrading to double surface dressing of Magu – Bukwimba – Ngudu – Hungumalwa road (71 Km) in mwanza region.
- 31 Consultancy services for carrying out feasibility study, environmental and social impact assessment, detailed engineering design and preparation of tender documents for upgrading of Same – Kisiwani – Mkomazi road (100.5 Km ) to bitumen standard
- 32 Consultancy services for feasibility study, environmental and social impact assessment, detailed engineering design and preparation of tender documents for construction of Nduruma & Kimosonu Bridges along Kijenge – Usa River and Usa – Oldonyosambu roads.
- 33 Consultancy services for feasibility study, environmental and social impact assessment, detailed engineering design and preparation of tender documents for construction of Sanza – Chali – Igongo (SGD/DOD BRD) regional road (R433)
- 34 Consultancy services for detailed engineering design for upgrading of Goba – Madale road 5 km to bitumen standards
- 35 Consultancy services for detailed engineering design for upgrading of Chanika – Mbande road 5 km to bitumen standards
- 36 Consultancy services for carrying out feasibility study, detailed engineering design and preparation of tender document for upgrading to asphalt concrete of Uhuru 0.67 Km, Msonobari 0.4 km, Makonde 0.6 km roads, including Mchinga road and double surface dressing of rest house 0.67 km, Nkuruma 0.43 km, Amani 0.49 Km, Jamaica 1.70 km, Mpilipili 0.78 km, and Eilat 1.62 km roads.
- 37 Consultancy services for preparation of a full – scale resettlement Action plan for Zanzibar new city centre kwahani Zanzibar
- 38 Consultancy service for provision of topographical survey and Geotechnical survey for the proposed Zanzibar new city centre at kwahan and Chumbuni – Zanzibar.
- 39 Consultancy services for supervision of upgrading soko la Mnarani – Nida Road (1.06 km) to bitumen standard
- 40 Consultancy services for feasibility study, environmental and social impact Assessment, Detailed engineering design and preparation of tender documents for construction of Kalambo bridge (80m long) Along Mtutumbe JCT – Mtutumbe – kasitu – Nondo Road.
- 41 Consultancy services for feasibility study, preliminary design, Environmental and social impact assessment, detailed engineering design and preparation of tender documents for construction of a Mtera bridge and its approach roads to bypass Mtera dam and the Babati town bypass (15.5 Km)



- 42 Consultancy services for provision of transaction advisory services for carrying out review of preliminary design and feasibility study, preparation of tender documents, tender administration and facilitation of financial close lot no 1: Mtwara to Amerlia (Manda) bay via Songea with spurs to Linganga and Mchuchuma railways projects under Public and Private Partnership (PPP).
- 43 Consultancy service for provision of consultancy services for feasibility study and preliminary design for Dodoma capital city commuter trains services.
- 44 Survey and soil investigation for detailed engineering design of access Road including drainage system & associated services for 400/220 kv Arusha new substation Tanzania.
- 45 Consultancy services for carrying out feasibility study ,ESIA, detailed engineering design and preparation of tender documents for upgrading to double surface dressing of monduli – Engaruka (Ngaresh – Enguiki section) (11 km) in Arusha region.
- 46 Consultancy services for carrying out feasibility study, detailed engineering design and preparation of tender documents for upgrading of Wenda – Mgama road (19 Km) in Iringa district-ihemi cluster and mtili-ifwagi-mkuta road (14km) in mufindi district-ihem cluster to Appropriate sealing standard for the Tanzania rural and urban road agency (TARURA).
- 47 Consultancy services for carrying out feasibility study, Environmental & Social Impact Assessment [ESIA], detailed engineering design and preparation of tender document for upgrading of Matomondo-Mlale road (23 Km) in songea district to bitumen standard for the Tanzania Rural and Urban Roads Agency (TARURA)
- 48 Consultancy services for development of quality assurance systems for TARURA.
- 49 Consultancy services for supervision of construction of new Wami bridge (513.5 m) and its approach roads (4.325 Km).
- 50 Consultancy services for detailed engineering design of the access road for 400/200 kv new Arusha Kisongo substation.
- 51 Consultancy services for supervision of rehabilitation and upgrading of Songea Airport.
- 52 Consultancy services for carrying out feasibility study, detailed engineering design and preparation of tender documents for Pemba airport and conduct/carry out Zanzibar Airport master plan and land use plan for Abeid Aman Karume International airport (AAKIA).
- 53 Consulting services for the construction supervision of the rehabilitation of the Kafue Mazabuka Road (TI) In southern province - lot 2.
- 54 Consultancy Services for Feasibility Study, Detailed Engineering Design and Preparation of Tender Documents for Construction of Kelema Maziwani Bridge and Its Approach Roads to gravel standard (1.5 Km) along Kondoa - Bicha - Dalai Regional Road, R.462.
- 55 Consultancy Services for Feasibility Study, Detailed Engineering Design and Preparation of Tendering Documents for Construction of Suguta and Mwanjiri Bridges and their approach roads to Gravel Standard (1.5 Km) along Pandambili-Mlali-Ng'ambi Regional Road, R.470.
- 56 Provision for Consulting services for Review of Feasibility study, Environmental and Social Impact Assessment, Detailed Engineering Design and Preparation of Tender Documents and Supervision of Construction of Sukuma Bridge along Magu - Mahaha road in Mwanza Region.
- 57 Consulting Services for carrying out Topographical Surveying for Proposed Expansion of Aga Khan Hospital in Dar Es Salaam, Tanzania.
- 58 Feasibility Assessment, Detailed Design and Technical Specifications for Rehabilitation of Maydh-Erigavo Road.



- 59 Consultancy Services For Feasibility Study, Detailed Engineering Design And Preparation Of Tender Documents For Upgrading Of Bariadi – Kisesa – Mwandoya – Ngoboko – Mwanhuzi – Sibiti – Mkalama – Iguguno Road: Mkalama – Gumanga – Nduguti – Iguguno Section (89 Km) To Bitumen Standard.
- 60 Consultancy Services For Economic Study, Detailed Engineering Design, Environmental & Social Impact Assessment And Preparation Of Tender Documents For Rehabilitation Of Singida - Shelui Road Section (110 Km).
- 61 Consultancy services for Feasibility Study, Detailed Engineering Design and Preparation of Tender Documents for Upgrading of Isongole II – Kasumulu – Ipyana – Katumbasongwe Regional Road 114.67 Km Including Ndembo – Isoko Spur Road 6 Km to Bitumen Standard.
- 62 Consultancy Services For Feasibility Study, Detailed Engineering Design, Environmental & Social Impact Assessment And Preparation Of Bidding Documents For Upgrading Of Singida Urban- Ilongero - Haydom Road (93.3 Km) To Bitumen Standard.
- 63 Consultancy Services For Detailed And Construction Supervision Of Selected Bridges On Mangochi - Makanjira Road.







# AES Materials Lab



The AES **Materials Lab** is a registered materials testing laboratory [No. 029] and semi-autonomous division of the Advanced Engineering Solutions Ltd, a registered civil engineering consulting firm with its headquarters at Mikocheni B in Dar es Salaam.

The Laboratory is located in Dodoma, the central and capital city of the United Republic of Tanzania. Being positioned at the geographic center of the country, the Laboratory is reachable from all directions (north, south, east and west) of the country through good highways and air transport as well as the railway line from coast to western regions and neighboring countries.

The Laboratory division has been established to offer a wide range of both field and laboratory testing on construction materials for projects from highways, airports, buildings, bridges, dams through tunnels and to offer other engineering services. It is organised to carry out numerous testing services for natural construction materials and processed materials such as:

- Soil,
- Aggregates
- Concrete
- Asphalt
- Surface dressing
- Stabilised soil
- Water

Apart from the materials testing, the Laboratory is so equipped to quickly, accurately and cost-effectively run various mixes design for construction materials such as concrete, shotcrete, grouts, asphalt, surface dressing, soil stabilisation, etc. It is also dealing with field testing, materials investigations and pavement design as well as project quality control (QA/QC) and providing professional advice and training to engineering practitioners.

The Lab has over 12 employees, including the Manager, who is a registered civil engineer with post-graduate diploma in engineering management, four civil engineers (graduate and registered engineers), one geologist and five qualified civil engineering technicians with ordinary diploma (NTA Level 6). The team has a support of three assistant technicians and other auxiliary personnel (secretary, cleaner, driver and security guards).



## Our Experience

Our engineers and technicians have great experience with a wide range of soils, rock types and various mixes design (e.g., concrete, shotcrete, asphalt, surface dressing, soil stabilisation, etc.) and pavement design as well as planning geotechnical investigations and negotiations with drilling firms and other institutional laboratories for accomplishing some tests that currently are not conducted in our Lab. The team is also conversant with the wide range of testing standards and is conducting and evaluating the test results according to the client's needs.

# Testing Capability

## 1. Soil / Gravel

- Atterberg limits
- Linear shrinkage
- Sieve analysis
- Specific Gravity
- MDD / OMC
- CBR & Swell
- Crumb Test
- In-situ Density
- DCP (60 cone)

## 2. Coarse Aggregates

- Shape test (FI & EI)
- TFV
- ACV
- AIV
- LAA
- Bitumen a nity
- Sulphate Soundness
- SG & Water absorption
- Density (loose & rodded)

## 4. Concrete Mixes

- Workability of concrete (slump)
- Bleeding of concrete
- Density of concrete
- Strength (cube, cylinder, in-situ)
- Concrete Mix Design

## 3. Fine Aggregate (Sand)

- Clay Lumps
- Sieve Analysis
- Organic Impurities
- Material finer than 75µm
- SG & Water Absorption





## 5. Soil Stabilisation

- Initial Consumption of Lime (ICL)
- MDD / OMC Relationship
- Atterberg limits (LL, PL & PI)
- Grading Modulus of gravel
- Unconfined Compr. Strength (UCS)
- Soil-cement/lime Mix Design

## 6. Asphalt Mixes

- Bitumen Extraction
- Densities (Gmm & Gmb)
- Marshall Stability & Flow
- Voids determination
- Asphalt Mix Design

## 7. Surface Dressing

- Average Least Dimension (ALD)
- Design of the application Rates
- Determination of rates at site

## 8. Common Parameters

- Temperature measurement
- Moisture content measurement
- Mass / Weight measurement



# Major Projects Undertaken (2017 – 2019)

After its establishment in 2017, the **AES Materials** Testing Laboratory has already extended its services to the following large projects:



01 Consultancy Services for Feasibility Study, Detailed Engineering Design and Preparation of Tender Documents for Upgrading of Wenda – Mgama Road (19 Km) In Iringa District – Ihemi Cluster and Mtili – Ifwagi – Mkuta Road (14 Km) In Mufindi District – Ihemi Cluster to appropriate Sealing Standard

02 Alignment Soil and Materials Investigation for Feasibility Study and Detailed Engineering Design of Monduli – Engaruka Road Project (11.5 Km) in Arusha Region – Tanzania.



03 Alignment Soil and Materials Investigation for Feasibility Study and Detailed Engineering Design of Same – Kisiwani – Mkomazi Road Project (100 km) in Kilimanjaro Region – Tanzania.

04 Alignment Soil and Materials Investigation for Detailed Engineering Design of Access Road (6.5 km) for the New 400/220kV Substation in Lemugur (Arusha) – Tanzania.

05 Alignment Soil and Materials Investigation for Feasibility Study and Detailed Engineering Design of Mtwarapachani – Tunduru Road Project (300 km) in Ruvuma Region – Tanzania

06 Materials and Geotechnical Investigation for Feasibility Study Review and Detailed Engineering Design for Msalato Airport in Dodoma – TZ.



# Surveying Department

## ComNav T300 GNSS Receivers

With a vast experience of GNSS survey, T300 GNSS receiver is one of the most reliable choices for any surveying tasks. Strong signal tracking ability, hot swap battery and rugged housing design make the T300 perfectly and effectively work even in harsh environments.



## Sokkia B40 Automatic Level

Sokkia B Series automatic levels feature enhanced reliability under all environmental conditions. Tough and compact bodies are more tightly sealed against water, humidity and dust.



## Delair UX11

UX 11 is one of the fixed wing drones, It offers the easiest way to achieve professional Photogrammetry products such as Point Cloud, DOM, georeferenced DEMs, DSM Contour Lines and Orthomosaics. It can map beyond the visible with ease.



## CHCNAV APACHE 3 USV

Featuring triple-hulled and the shallow draught design, the APACHE 3 USV offers a portable remotely controlled platform in small lakes, inland rivers, and coastal water for bathymetric surveys.



## Leica TCR110 Total Station

The TCR110 Series stand up to any weather condition that occurs in the field, giving the great benefit of no experiencing down time.



# Axle Load Survey Department

Advanced Engineering Solutions AXLE LOAD SURVEY DEPARTMENT provides the most comprehensive array of services available. Because our sole focus is Axle Load surveying, we invest heavily in the latest Axle Load surveying Equipment (Mobile Weighbridge) and computer technologies and most experienced staff. This investment allows us to provide Axle Load surveying services that meet the unique needs of each client and projects.

## Purpose

Axle load Survey provides valuable and Essential Information that are required for Cost Effective Pavement Design and Preservation of the Existing Roads

## Measurement of Axle Load for Pavement Design

The success of an axle load survey and the ease with which it can be carried out depends very largely on the choice of site. The traffic must be selected to make it possible to sample the traffic easily and safely.

During Axle Load Survey We ensure that:

- The Correct road Section is Surveyed
- Traffic in each direction is Captured and Surveyed.
- The Traffic safety aspects are well considered.
- There is no access to easy detour to avoid the survey site.
- The Local police are involved through the whole survey duration.

## Traffic Management

During the Axle Load Survey, the Traffic warning signs are always installed for the safety of survey Team and Road Users.

## Mobile Weighbridge

Mobile weighbridge consists of Portable weighing pads that can be used singly or in pairs to measure the individual wheel or axle load of a vehicle. Weighing Pads are connected to the Display by Wire. The Display is Capable of recording and Store the Collected Survey Data.

## Specifications of Our Mobile Weigh Bridge

- Model – M6
- Maker – MzikScale
- Capacity – Each Pad Capacity 30 Ton
- Size – 720 x 400 x 43 mm
- Accuracy – 0.05-1 % (In Static Mode), 2 to 3.5 % (in Dynamic Mode Up to speed of 2 Kph).



# AES Forensic Engineering Department

The purpose of the forensic engineering department is to determine the cause or causes of failure or damage and to propose appropriate remedial solutions to repair, maintain and extend the life of infrastructures. Advanced Engineering Solutions has considerable expertise and experience in the investigation, assessment and rectification of various infrastructures. AES has carried out numerous such investigations where we have recommended practical and cost-effective solutions and rectification works.





# Our Services

## INVESTIGATIONS & REPORTING



We provide forensic engineering investigation services to all industries and sectors including construction, Legal, insurance and banking. We also provide our services to both private and public sectors. We specialize in the areas of Structural, Civil and Geotechnical engineering, but also have a related Mechanical, Electrical and Hydraulic engineering capabilities. Impartial and comprehensive investigations are undertaken by experienced forensic engineers to assist our clients with problems and issues encountered with all infrastructure elements. Advanced Engineering Solutions conducts inspections of all types of infrastructure elements [including houses [multi-residential, commercial and industrial], bridges, and Pavement structures], and provides inspection reports and associated advice. As part of our Forensic engineering investigation services, Advanced Engineering Solutions can assess, determine and provide expert opinion on the cause of defects and damage.

## REMEDIAL METHODOLOGY & REPAIR ADVICE



In addition to our investigation expertise, Advanced Engineering Solutions can formulate appropriate and practical remediation works and repair solutions. Scope of Works and appropriate design and drawings can be prepared for costing purposes, for approval purposes or for construction purposes.

## DUE DILIGENCE & DILAPIDATION SURVEY REPORTS



Advanced Engineering Solutions undertakes condition surveys of all types of infrastructure elements, for the purpose of a preparation of a Due Diligence Report. This report enables the development of maintenance plans or appropriate work schedules. Dilapidation survey reports is a record of the condition of infrastructures and documents the damage and defects to enable evaluation of pre and post construction condition. Our dilapidation reports clearly and concisely catalogue defects to allow a comparative and determine any damage caused due to nearby construction activity.

## DISASTER RESPONSE



We provide investigation services for fire, flood, earthquake and storm damage. Disaster response engineering can be as dangerous and critical as the disaster itself. We are experienced in providing rapid response nationwide to make safe scenarios to enable emergency services access. Our expert team conduct structural surveys of damaged structures and assess them for structural adequacy.

## EXPERT WITNESS, REPORTS AND CONSTRUCTION DISPUTE ADVICE



Advanced Engineering Solutions is a leading provider of expert report and expert witness services in relation to construction disputes and litigation. We provide professional, ethical and pragmatic advice to our clients and pride ourselves on being proactive and flexible in finding solutions that assist in the resolution of construction disputes.



# AES

## Structural Engineering Department

We always tailor our design strategy to your individual project and your specific goals. our intelligent structural and civil engineering services will ensure you get the best possible design, at the best possible price.

Advanced Engineering Solutions has considerable expertise and experience in the investigation, assessment and rectification of various infrastructures. AES has carried out numerous such investigations where we have recommended practical and cost-effective solutions and rectification works.



### HYDROLOGICAL ANALYSIS & DESIGN

We provide hydrological analysis and design services for all road projects this includes study on removal of road surface and subsurface water away from pavement structure so as to assure structural integrity of the pavement and road as the whole. our services are for both private and public sectors. We specialize in the areas of rainfall analysis including precipitation projection models, Investigation of Existing drainage structures (I.e. Inventory and Condition survey as per standard codes set forth for execution process), Catchment delineation by employing Commercial GIS Based software's and Appropriate Topographical Maps, Establishment of rainfall Intensity duration as per Rainfall Data, as well as runoff estimation with regards to catchments and its characteristics.



In the area of Hydraulic analysis and design, our services encapsulate: River hydraulics (i.e. study on river characteristics, flow morphology, river transportation behavior and erosion activities), Sizing of drainage structures & Flood Modeling by employing commercial software's, Design of side drains and Scour analysis.



# Structural Analysis And Design

**AES** has gained vast Experience in analysis & design of Highway drainage structures, Railway drainage structures, Airport Drainage structure and Buildings both Residential, Commercial & Industrial.



Our Engineering Team has specialized in variety FEM analysis and design software and other analytical solutions so as to ease the analysis & design process. The types of analysis and Design performed include:

- ✓ Dynamic analysis including seismic and impact loads response.
- ✓ Evaluation of other static and dynamic structural loads including wind and support settlement.
- ✓ Material and geometrical non-linear structural analysis.
- ✓ Soil-structure interaction analysis.
- ✓ Evaluation of Internal forces (including Bending & Torsional Moments, Shear forces, Displacement etc.)
- ✓ Design and detailing of concrete building



Designed Commercial Building



New Wami Bridge (513.5m)



# Highway Engineering Department

The department has a vast experience in various facets such as planning, traffic forecast to meet future demand, design, construction supervision and preparation of maintenance strategies for road projects.

**AES** works intuitively to meet client satisfaction in preparing a user-friendly facility that links the human, vehicular behavior and the roadway environment with minimal impacts at considerable cost - effective solutions.

## GEOMETRICAL DESIGN OF ROADS, RAILWAYS AND AIR STRIPS

We provide detailed engineering design services that includes preparation of three-dimension layouts (plan, profile and cross sections) for road alignments, railway and airstrips to accommodate various modes of transport with minimal environmental damage.

Our outputs are based on the use of advanced automated road design applications such as:

- 4D Plateia
- ODOS
- Mensura Genius
- Civil CAD
- Civil 3D





## TRAFFIC STUDIES AND ANALYSIS

We carry out traffic surveys and analysis to forecast requirements for road geometric and pavement design and for economic and environmental evaluations of the road projects. The department engages and serves in developing transportation models that offer best solutions to transport problems in various fields such as roads, airport and railway facilities.



## SUPERVISION AND MANAGEMENT OF CONSTRUCTION WORKS

The department has an extensive knowledge and reputable experience in various construction supervision works. We ensure timely delivery, quality as well as value for money output based on client satisfaction.





## Our Projects



Site visit for one of our projects, consultancy service for supervision services for construction of Passenger Terminal 3 complex and associated works & facilities at Julius Nyerere International Airport - Tanzania



Progress meeting at JNIA, one of our projects



# Our Clients

We are trusted by our client all over and outside **Tanzania**, some of our client are listed here under and the list is still growing



TANZANIA NATIONAL  
ROADS AGENCY  
(TANROADS)



TANZANIA RURAL AND URBAN  
ROADS AGENCY (TARURA)



TANZANIA AIRPORTS  
AUTHORITY



KONGWA DISTRICT  
COUNCIL



LINDI MUNICIPAL  
COUNCIL



MUSOMA MUNICIPAL  
COUNCIL



KIBAHA TOWN  
COUNCIL



SONGAS LIMITED



BUKOBA MUNICIPAL  
COUNCIL



TANZANIA ELECTRIC SUPPLY  
COMPANY (TANESCO)



PANAFRICAN  
ENERGY



TANZANIA MINISTRY OF  
FINANCE



CONSORTIUM  
ENERGOINVEST (EMC)



ROAD DEVELOPMENT  
AGENCY (ZAMBIA)



ZANZIBAR SOCIAL  
SECURITY FUND (ZSSSF)



NWANANCHI ENGINEERING  
& CONTRACTING CO LTD



RWANDA TRANSPORT  
DEVELOPMENT AGENCY



THE AGA KHAN  
HOSPITAL



ADDIS ABABA  
CITY ROADS AUTHORITY



TABORA MUNICIPAL  
COUNCIL (TMC)



MALAWI DEPARTMENT OF  
DISASTER







## FEEL FREE TO **CONTACT US**

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