OBOO SUNDAY FREDRICK

Civil & Structural Engineer |

BSC ENG, MIEK

Profile

I have had a solid active career spanning more than five years. During this period of my professional career, I have been involved in structural design, preparation of structural drawings and bar bending schedules, attendance of design meetings, site meetings and site inspection meetings and interpretation and approval of materials test reports and results as submitted for different projects.

I am fully conversant with the use of computers and application software packages in AutoCAD, MS Word, MS Excel, MS Power Point, MS Project, Spreadsheets, Prokon Structural Analysis & Design and REVIT.

Contact

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Education

Msc. Structural Engineering

From Sep 2017 to Date

University Of Nairobi

Bsc. Civil Engineering – First Class Honors

August 2014

University Of Nairobi

K.C.S.E Certificate – Mean grade A-

January 2009

Kanyawanga High School

K.C.P.E Certificate – Mean grade A- (380 points)

December 2004

Nyabohanse Boys Primary School

Employment History

Metrix Integrated Consultancy

Civil & Structural Engineer

July 2014 to Present

Involved with sourcing out for jobs, attending design meetings, interpretation of architectural, survey and geotechnical plans, design and drafting of the structures, conducting site inspections, survey and preparation of audit reports on existing structures and preparation of job proposals.

Professional Membership

I have been involved in analysis, interpretation and supervision of civil works in all the projects I have undertaken.

- Registered Member with Engineers Board of Kenya.
- Registered Corporate Member with Institution of Engineers of Kenya. (M.5406)

Detailed report on training and experience

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Position held: Assistant Civil and Structural Engineer,

Firm: Metrix Integrated Consultancy

I was tasked with the following responsibilities;

- Structural analysis and design of timber, reinforced concrete and steel elements.
- Preparation, production and checking of structural drawings using AutoCAD.
- Preparation and checking of bar bending schedules and steel quantities extracted from the structural drawings.
- Preparation of civil works drawings.
- Inspection of reinforcement during construction.
- Attendance of design meetings, site meetings and site inspection meetings.
- Interpretation and approval of materials test reports and results as submitted for different projects.
- Preparation of Technical Design Reports.
- Preparation of Technical Investigation Reports.
- Approval of shop drawings as submitted by main contractors, steel fabricators or private developer

I undertook the following projects working in Metrix Integrated Consultancy, this included design, detailing and construction supervision.

June 2014 – September 2014(4 months)

School Development,

Client: St. Andrews School Turi

Position: Project Structural Engineer

The project involved construction of a one story staffroom block situated within the school premises.

The design was a combination of both a frame and load-bearing walls structure. The slab thickness over the lounge area was 200mm due to the huge unsupported spans while the rest of the areas was 150mm. I instructed the contractor to do trial pits in order to determine the nature of soil for our structure to be founded on, also asked the contractor to various tests on the materials to be brought to site. I adopted a safe soil bearing pressure of 150kN/m2 that I used in the design of foundations.

August 2014 – July 2015 (12 months)

Residential Development,

Client: Anjara Homes

Position: Project Structural Engineer

This project involved the construction of 4No three story executive townhouses with a gym, domestic servant quarter, and canalization of a river on plot LR No. 3734/509, Lavington. The houses were located on tricky sloping terrain that involved construction of retaining walls on the lower units.

The design was a combined design of frame and load-bearing structure. The slab thickness 150mm and on other areas I adopted a 300mm thick hollow pot slab due to the open spans. After instructing the contractor to do a number of trial pits and only find stiff red soil on the foundations I adopted a safe bearing pressure of 100 kN/m2.

December 2014 – Ongoing

Blue Waters Hotel – Kisumu

Client: Mr & Mrs Osewe

Position: Project Structural Engineer

An eight storey framed structure close to Lake Victoria, accommodating about 80 rooms, conference rooms, restaurant, roof top swimming pool, salon, spa, gym and health club, in Kisumu Municipality Plot Block 13/16, Dunga Beach Road

I designed the building to be a fully framed structure. The building has two lift shafts one at the centre and the other one on the side. I designed the two to take the lateral loads. All the slabs are 175mm thick except the mezzanine floor which is a 300mm thick hollow pot.

The foundation design was isolated pad footings with bearing capacity assumed as 300kN/m2

March 2014– Feb 2016 (12 months)

Residential Development

Client: Thika Gateway Apartments

Position: Project Structural Engineer

The project involved the construction of an eleven storey apartment block housing 40 units of three bedroomed apartments with one level basement parking and one level ground parking, overhead water tank and gatehouse. The roof was flat roof with a terrace. The project was built on Plot LR No. 4193/1991 off Garissa road, Thika.

The building was designed as a fully framed structure. The foundation type was isolated pad footings and the safe bearing pressure that i adopted was 450kN/m2.

The slab thickness was 150mm thick solid slab with 500x200mm down stand beams. The structure has two shear walls by the staircase and a centrally placed lift shaft to take care of lateral loads.

Dec 2015 – Feb 2016 (3 months)

Commercial Development

Client: Thika Gateway Mall

Position: Assistant Project Structural Engineer

The project involved the construction of a four storey commercial block, with one level basement parking. The roof was flat roof with a terrace. The project was built on Plot LR No. 4193/1991 off Garissa road, Thika.

The building was designed as a fully framed structure. The foundation type was isolated pad footings and the safe bearing pressure that i adopted was 450kN/m2.

I was only involved in the design of the roof top terrace and canopy.

July 2016- July 2016 (1 month)

Commercial Development

Client: Valley Arcade

Position: Project Structural Engineer

This project involved additions and alterations to the upper level structures in flats 1 and 2 in order to open up larger retail space.

Involved in structural strengthening of the existing roof trusses since the internal intermediate wall supports were to be demolished. I did this by doubling both the bottom and top chords in order for them to take the extra roof weight.

January 2015 - March 2015 (3 months)

Office Development

Client: DMJ Architects

Position: Project Structural Engineer

This project consisted of the construction of an office extension on Plot LR. No 1870/v/46 east church road Westlands. The design involved the design isolated concrete bases to take the steel columns.

The floor deck was done in timber sitting on top of steel beams welded on to the steel columns. The roof is done in timber rafters with an iron sheet on top.

October 2015 - August 2016 (11 months)

Residential Development

Client: Philippa House

Position: Project Structural Engineer

This project consisted of construction three-bedroom outhouse, pool pavilion, swimming pool, renovations to the main house, boundary wall and gate house on Plot LR. No. block 110/870 Thome, Nairobi.

Load transmission on all structures was entirely through load bearing walls to the strip footings. I provided nominal columns at the corners of the fracture to offer rigidity.

From trial pits done by the contractor I adopted a safe bearing pressure of 150kN/m2.

November 2014 – April 2017 (18 months)

Mr. Jimmy residence

Client: Delta Properties

Position: Project Structural Engineer

The project involved design of one story main house, one story outhouse, a Dsq and a gate house on plot LR. No 7752/46 kibagare way, Nairobi.

The structural system adopted for this project was 175mm thick solid slabs for roof slab and 200mm thick solid slab on the 1st floor slab as per the client request.

I adopted beam sizes of 600x200mm all down stand. Load transfer to the foundations was through load bearing walls. A strip Foundation and isolated bases at the corners for stiffness columns were provided. The ground condition was stiff red soil with safe bearing pressure of 100kN/m2.

July 2016 – August 2019

Hotel Development

Client: Grand West Hotel.

Position: Assistant Project Structural Engineer

This project consisted of a 10 storey development with two levels basement and a flat roof on Plot LR. No. 1870/ix/8 along Karuna Road, Westlands Nairobi.

I designed the building as a fully framed structure with 175mm thick solid slab on the basement levels and 150mm thick solid slab on the typical floors and flat roof slab. The adopted a safe bearing pressure was 600kN/m2.

I was Involved in the design of the top steel terrace, steel first floor atrium and internal modifications.

May 2016 – June 2019

Residential Development

Client: Minah Heights

Position: Project Structural Engineer

This project involved the construction of a ten storey four bedroomed residential apartments accommodating 20 units in total with staff quarters on every unit and a ground floor parking below the structure. The development is situated on Plot LR No. 1870/vi/205 Prof saitoti road, Westlands, Nairobi.

I designed the building to be a fully framed structure. The typical floors are done with a 235mm thick Eps slab and 600x200mm down-stand beams. The roof slab is a solid slab with a thickness of 175mm.

The structure has a lift shaft that is designed to take any lateral loads

The foundations are made of isolated pad footings and the adopted safe bearing pressure was 400KN/m2.

October 2016 – Ongoing

Community Centre

Client: SSJS Loresho

Position: Project Structural Engineer

This project consists of an ultramodern community Centre with 2No. Underground parking basements, prayer halls, dining areas and an auditorium the development is situated on Plot LR. No. 9729/6&7 Loresho, Nairobi.

I designed the building as a fully framed structure with 175mm thick solid slab on the basements and other floors. The foundation design was isolated pad footings with soil bearing capacity of 150kN/m2

October 2016 - Ongoing

Commercial Development

Client: Naivasha Safari Centre

Position: Project Structural Engineer

A commercial centre consisting of a super market, retail shops, restaurant and a petrol station. The development is situated along Nairobi – Naivasha highway on plot LR. No 1556/26/1 Naivasha.

I designed the structure to be purely load bearing and only placing columns where I have large openings, at corners of the structure to offer rigidity and along spans greater than 6m in order to break the spans.

After asking the contractor to do trial pits, we found the sub-soil conditions to be stiff red soil and I adopted a safe bearing pressure of 100kN/m2.

The roof is to be done in steel trusses and purlins with IT5 roofing sheets.

September 2017 – Ongoing

Commercial Development.

Client: Makutano Safari Centre

Position: Project Structural Engineer

A commercial centre still at design stages consisting of a super market, retail shops, restaurant and a petrol station. The development is situated along Nairobi – Makutano junction highway on plot LR. No Mwerua/Rukanga/4299 and 4300 Kiranyaga County, Makutano.

I designed the structure to be purely load bearing and only placing columns where I have large openings, at corners of the structure to offer rigidity and along spans greater than 6m in order to break the spans.

After asking the contractor to do trial pits, we found the sub-soil conditions to be stiff red soil and I adopted a safe bearing pressure of 300kN/m2.

The roof is to be done in steel trusses and purlins with IT5 roofing sheets.

May 2016 – On Going

Kileleshwa Apartments

Client: Jamaal & Associates

Position: Project Structural Engineer

The project is still at the design stages, I was involved design of the 14 storey 3 bedroom apartments with domestic servant quarters and a suspended three level above ground floor parking on located in Kileleshwa, Nairobi. The structure was designed as a fully framed structure.

The structural system adopted for this project was 175mm thick solid slabs on the three level parking floors and 150mm thick solid slab on the typical floors.

Geotechnical report was carried out and recommended foundations to be a minimum 2m depth with a safe bearing capacity of 350kN/m2.

July 2017 – January 2018 (6 Months)

Residential Development Imara Daima

Client: Shurie Mumin Afrah.

Position: Project Structural Engineer

This project involved the construction of a five storey one bedroom Residential apartments on plot LR. No. 209/18501 Imara Daima, Nairobi.

I designed the building as a fully framed structure with a 150mm thick solid slab on all typical floors.

The safe bearing pressure that was adopted for the design of the individual pad footings was 450kN/m2 as recommended from the trial pits conducted on site.

Feb 2018 – Ongoing

Residential Development Nanyuki

Client: Elgon Development LTD.

Position: Project Structural Engineer

This project involved the construction of three, four and five bedroom Residential town houses on plot LR. No. 10442/48 Nanyuki.

I designed the structure to be purely load bearing and only placing columns where I have large openings, at corners of the structure to offer rigidity and along spans greater than 6m in order to break the spans.

The safe bearing pressure that was adopted for the design of the individual pad footings was 150kN/m2 as recommended from the trial pits conducted on site.

Referees

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