A TECHNICAL REPORT ON STUDENT INDUSTRIAL TRAINING WORK EXPERIENCE SCHEME [SIWES]

UNDERTAKEN AT:

ARCHY KINGZ CONSULT is located at:

NO, 34 ODI OLOWO STREET, OSOGBO OSUN STATE

PRESENTED

AZEEZ FARUQ AYOMIDE

ND/23/SGI/FT/0060

SUBMITTED TO THE DEPARTMENT OF SURVEYING AND GEO- INFORMATICS

FACULTY OF ENVIRONMENTAL STUDIES, KWARA STATE POLYTECHNIC, ILORIN KWARA STATE.

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF ORDINARY

NATIONAL DIPLOMA (OND) IN SURVEYING AND GEO- INFORMATICS.

MARCH, 2025

CERTIFICATION

I, **AZEEZ FARUQ AYOMIDE** with Matric number **ND/23/SGI/FT/0060** hereby certify that the information contained in this SIWES report were obtained as a result of my experiences during my 4 month SIWES programme at **ARCHY KINGZ CONSULT** in accordance with survey rule and regulations and departmental instructions. I therefore submit the report as a partial fulfillment of the requirements for the student work experience scheme requirements for **KWARA STATE POLYTECHNIC ILORIN, KWARA STATE,** student work experience scheme.

_____ _____

DATE

(SIWES SUPERVISOR)

_____ _____

DATE

(SIWES COORDINATOR)

_____ _____

DATE

(HEAD OF DEPARTMENT)

_____

_____

AYOWALE OLAWALE **DATE**

DIRECTOR, DIRECTORATE OF

INDUSTRIAL LIAISONS PLACEMENT

DEDICATION

This Siwes report is dedicated to my lovely supporter/guidance

MR & MRS AZEEZ

ACKNOWLEDGEMENT

Praises and thanks to the Almighty GOD for his showers of blessing throughout my Industrial Training period and for a successful completion. I would like to express my deepest and sincere gratitude to my training supervisor and management of **GEO BEACON SURVEY SERVICE LTD** and other sectional heads in person of Surv. B. A. Jimoh. He has given me the opportunity to carry out this Industrial training; providing invaluable guidance throughout the training period. His supervision, vision, sincerity and motivation was deeply inspired me. I am extremely grateful for what he has offered me. I would also like to thank him for his friendship, empathy and great sense of humor.

Also to thank my sectional head, head of field and Carto- section in Person of Surv. Babatunde Kabir, for all his trust, support and advice during my SIWES programme at the Company words cannot express all the knowledge he impacted in me. May God Almighty Allah bless you and your home.

Nevertheless, my profound acknowledgement will extend to my Head of Department of Surveying and Geo- informatics, The Federal Polytechnic Offa and all other departmental lecturers for the advice, support and correction made to me while in the classroom, during practical and every time I need their assistance. I pray you all continuous to leave in good health and more promotion on your field sir and ma.

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CHAPTER ONE

1.0 INTRODUCTION

This report presents my experiences and achievements during my six-month industrial attachment at **ARCHY KINGZ CONSULT.** The report provides an overview of the organization, its objectives, and the activities I was involved in during my attachment.

It also highlights the skills and knowledge I acquired during the period, including practical experience with surveying equipment, geospatial software, and project management techniques.

1.1 INCEPTION OF STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME

The Students Industrial Work Experience Scheme (SIWES) is a program that was established in Nigeria to bridge the gap between theoretical knowledge acquired in the classroom and practical skills required in the workplace. SIWES was initiated in Nigeria in 1973 by the federal government as a response to the need for practical exposure of students in higher institutions to real work environments. Its relevance in the education system cannot be over emphasized as it develops the student to become skilled and experience professionalism in the various disciplines. It enables students to appreciate the basic concept involved in their field of study. SIWES, which involves the university authorities and the industrial sector, runs for 24 weeks for students in the fourth academic year in the universities. The scheme was organized by the federal Government and jointly coordinated by the Industrial Training Fund (ITF) and the Nigerian Universities Commission (NUC). The importance of the training scheme is justified as it is a research field, which enables students to be totally in- depth in finding the working culture, practice and tools in their various areas of specialization.

1.2 OBJECTIVES

The Students' Industrial Work Experience Scheme (SIWES) was created with the goal of fostering and supporting the development of skills in business and industry in order to create a pool of qualified native workers sufficient to meet the demands of the economy. Any industrial organization's most valuable resource depends on the technical proficiency of its workforce to operate and maintain its non- human assets and resources, which is why SIWES is required. According to the program's operational norms and guidelines, students are assigned to a structured environment (private or public), whose operations are related to their course of study. The purpose of this training time is to help students at different levels connect the theory they learn in class to real- world applications. According to the government's education policy,

CHAPTER TWO

2.0 DESCRIPTION OF THE ESTABLISHEMENT OF ATTACHMENT

ARCHY KINGZ CONSULT is a private surveying and geospatial services company located in Osun State The company was established in 2018 with the aim of providing innovative and cutting-edge solutions in surveying, mapping, and geospatial consulting.

The company has a flat organizational structure, with a managing director at the helm. The managing director is supported by a team of experienced surveyors, geospatial analysts, and administrative staff.

Facilities and Equipment

GEO BEACONS SURVEY LIMITED has a well-equipped office with state-of-the-art surveying and geospatial equipment, including:

- Total stations
- GPS receivers
- GIS software (ArcGIS, QGIS)
- Surveying software (Autodesk, Carlson)
- Computers and laptops

Services Offered

The company offers a range of services, including:

- Topographic surveys
- Boundary surveys
- GIS mapping
- Geospatial consulting
- Project management

2.1 LOCATION AND BRIEF HISTORY OF ESTABLISHMENT

ARCHY KINGZ CONSULT is located at:

NO, 34 ODI OLOWO STREET, OSOGBO OSUN STATE

Brief History of Establishment

ARCHY KINGZ CONSULT was established in 2018 by **Surveyor AYOWALE OLAWALE** (**MNIS**) a seasoned surveyor with nine years of experience in the industry.

The company started as a small surveying firm providing services to local clients but has since grown to become a leading provider of surveying and geospatial services in [Region/State]. Over the years, the company has built a reputation for delivering high-quality services and has worked on numerous high-profile projects in Industry

ARCHY KINGZ CONSULT is a private Survey firm. The company was established and legal registered under C.A.C corporate commission in the year 2019, the firm name has been in existences since seven year back. And the firm has fully involved in both government and privates survey job both in the state and outside the Lagos State.

The mandate of the ministry is primarily to formulate and implement the policies, programmes and projects of the Federal Government of Nigeria (FGN) with respect to road transport, highway construction and rehabilitation; highways planning and design monitoring and maintenance of federal roads and bridges nationwide.

2.2 OBJECTIVES OF ESTABLISHMENT

The primary objective of establishing **ARCHY KINGZ CONSULT** is to provide innovative and cutting-edge surveying and geospatial services to clients in various industries, including:

Infrastructure Development : To support the development of infrastructure projects, such as roads, bridges, and buildings, by providing accurate and reliable surveying and mapping services.

Land Administration: To assist in the management and administration of land resources by providing services such as land surveying, mapping, and GIS analysis.

3. **Environmental Monitoring**: To support environmental monitoring and management efforts by providing services such as GPS tracking, GIS analysis, and remote sensing.

4. **Professional Development** To provide training and development opportunities for surveying and geospatial professionals, promoting capacity building and skills development in the industry.

aims to become a leading provider of surveying and geospatial services in the region, known for its excellence, innovation, and commitment to delivering high-quality services.

Topographic Surveying

Geographic Information System Analysis

Digital Mapping and Street Guide Mapping

Drone Mapping and Analysis

Hydrographic Surveying

2.3 Departments and Units in the Firm

The following departments/section were operated and function well, they are:-

ii. Managing Director

iii. GIS Section

iv. Admin. Section

v. Finance and Accounting Section

vi. SIWES/IT Student Section

ORGANIZATION STRUCTURE

MANAGING DIRECTOR

↓

GIS STORE

↓

ADMIN SECTION ← → SECRETARY

↓

SIWES/ IT STUDENTS

CHAPTER THREE

3.0 DETAIL OF THE TRAINIG WORKS

During my SIWES attachment at GEO BEACONS SURVEY LIMITED,
I had the opportunity to participate in several field survey projects.
This chapter reports on my experiences and the skills I acquired during these projects.

The term CAD (Computer Aided Design) applies to a wide range of programs that allow th user to created drawings, plans, and designs electronically. AutoCAD is one such program and it main claim to fame is that it is relatively easy to use, it is very comprehensive in its ability to create 2D and some 3D drawings, and it is very popular. Seventy percent of the CAD users in the world use AutoCAD.

I Starting AutoCAD

You can start AutoCAD by either double clicking on the program Icon on the desktop or by clicking on the program name in the Start menu.
The program will start and after a minute or so should display a screen similar to the one shown below. The dialog box in the middle will aid you in getting started at either creating a new drawing or continuing your work on a drawing that is not finished.

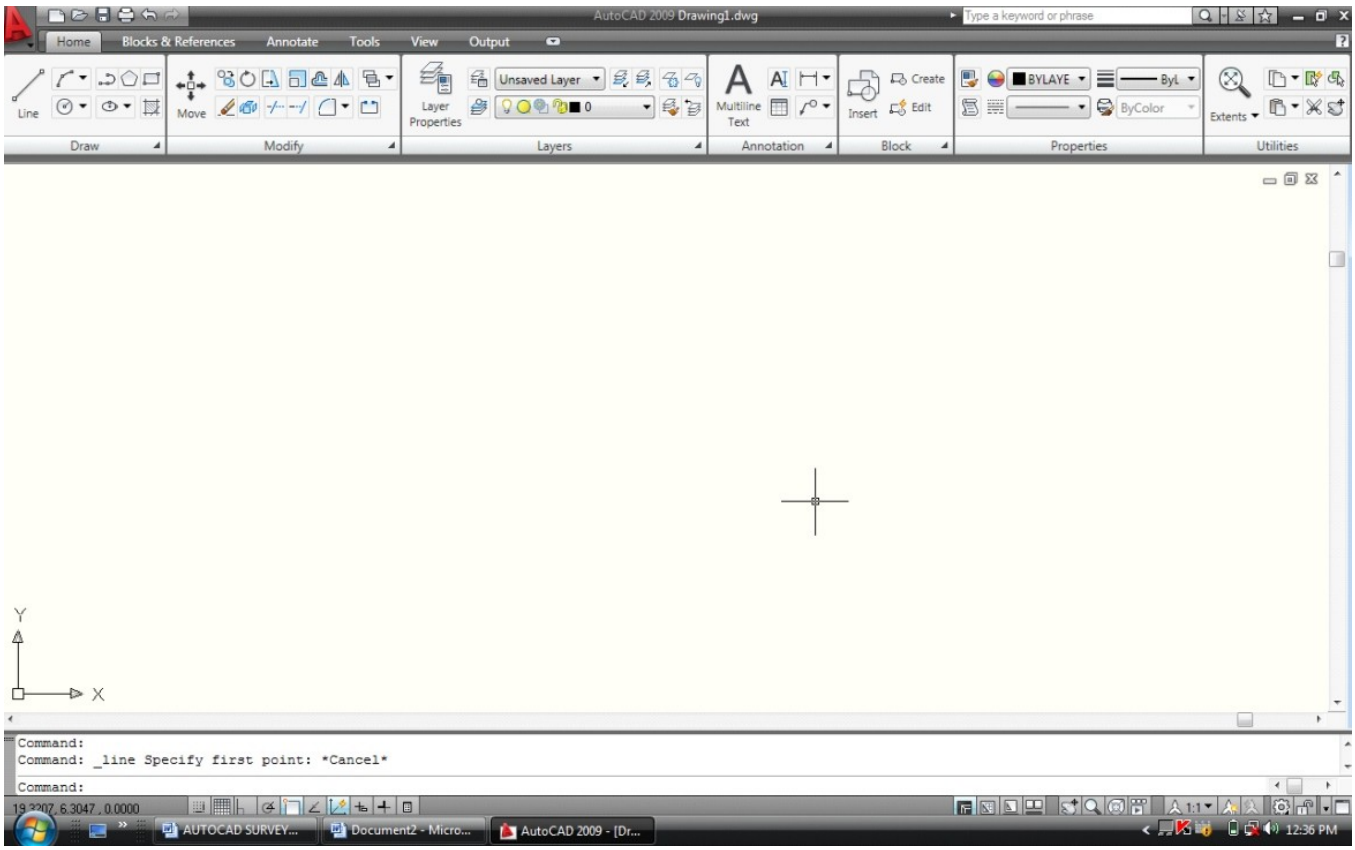
If you are continuing work on a drawing, click on the "A" icon in the extreme upper left corner of the window and Open->Drawing. A "Select File" dialog box will open allowing you to select the drawing file you want to open.

II The Initial Screen

AutoCAD has a very versatile user interface that allows you to control the program in several different ways. At the top of the window is a row of menus. Clicking on the Home, Insert, or Annotate causes another selection of menus to appear. This new selection of commands is frequently called a Ribbon or a Dashboard. You can operate the program by clicking on the icons in these menus.
Another method of using the program is typing in the command names. This is frequently faster than using drop down menus for frequently used commands because you do not have to search for the correct menu or icon.

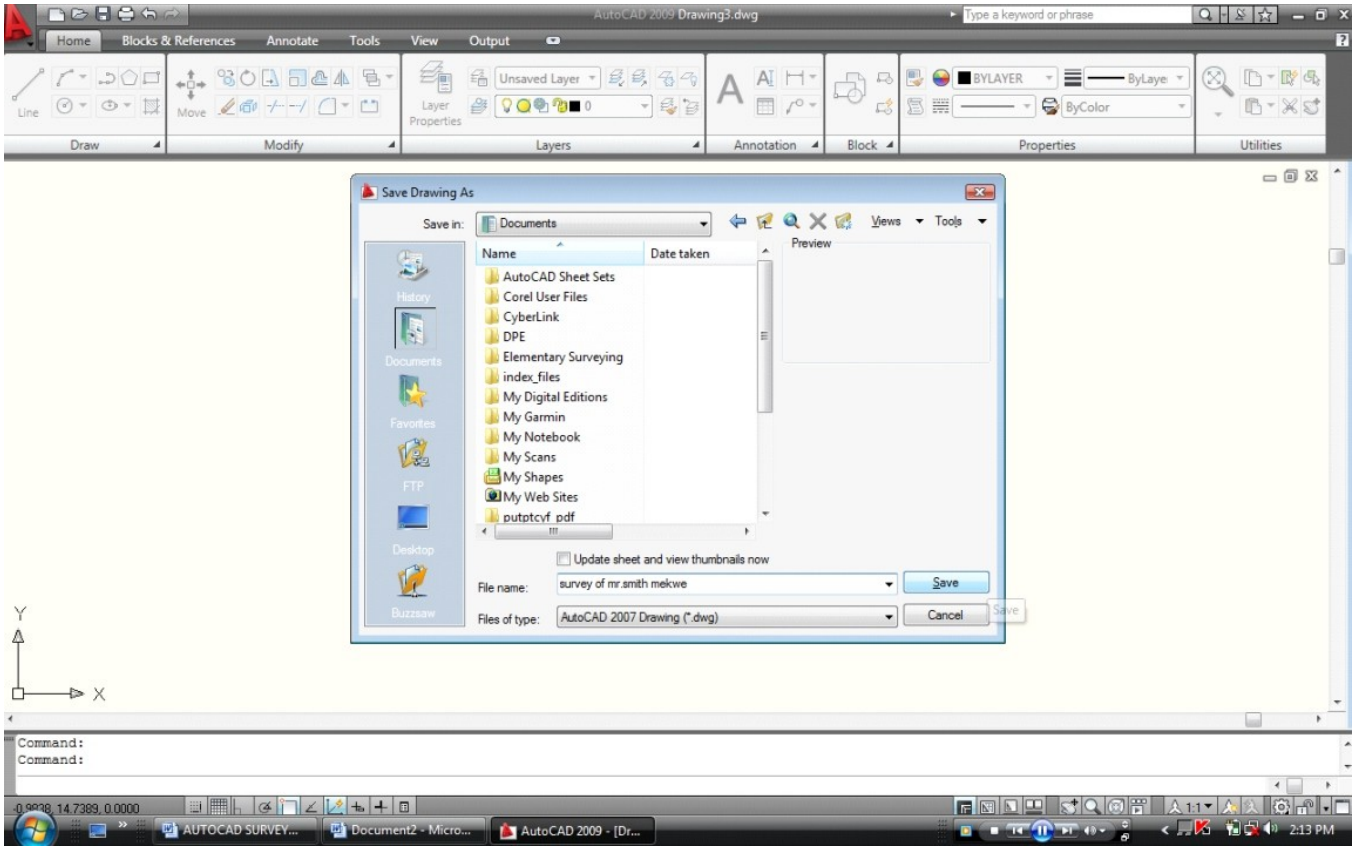
STEPS IN AUTO-CAD

Step 1: Open AutoCAD



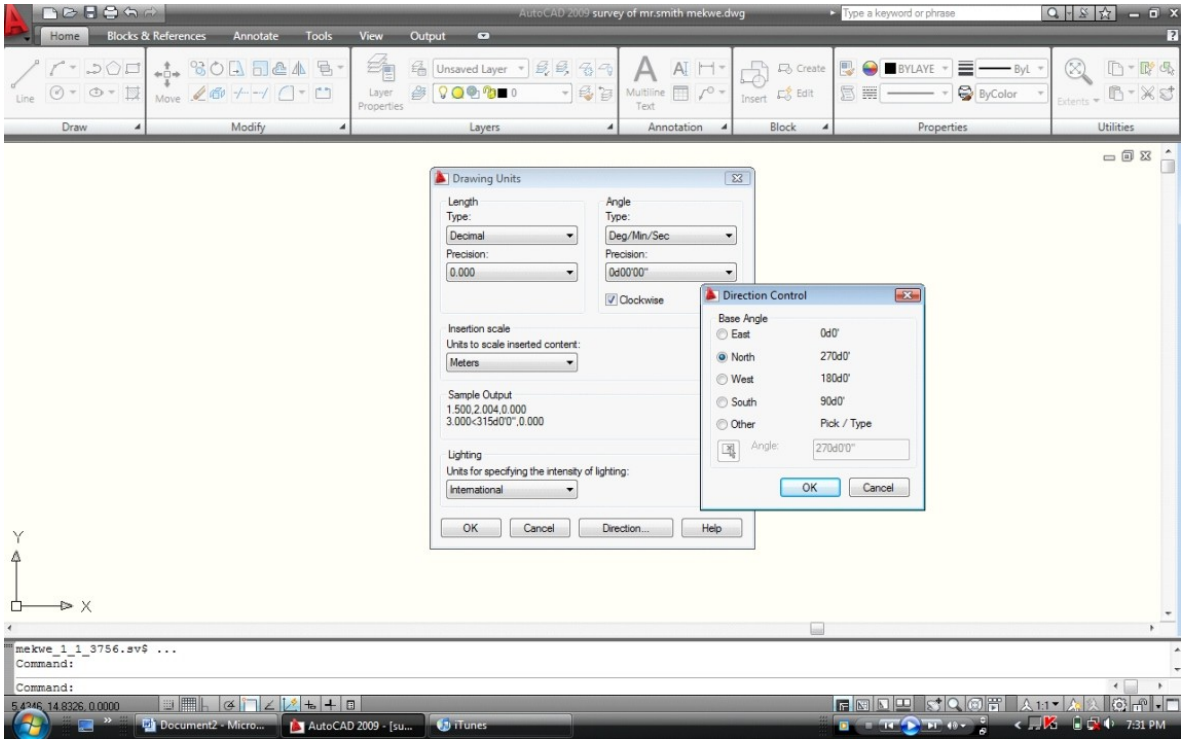
- Double-click on the AutoCAD icon on your computer to launch the application.
- Alternatively, you can search for AutoCAD in your computer's search bar and click on the application to open it.

Step 2: Name the Page



- Click on "File" in the top-left corner of the screen.
- Select "Save As" from the drop-down menu.
- Enter a name for your drawing in the "File Name" field.
- Choose a location to save your drawing and click "Save."

Step 3: Set Drawing Units



- Click on "Format" in the top menu bar.
- Select "Units" from the drop-down menu.
- In the "Drawing Units" dialog box, select the desired units for your drawing (e.g., feet, inches, meters, etc.).
- Click "OK" to apply the changes.

Step 4: Set Layers

- Click on the "Layer Properties" button in the "Layers" panel.
- In the "Layer Properties Manager" dialog box, click on the "New Layer" button.
- Enter a name for your new layer and select a color.
- Click "OK" to create the new layer.

Step 5: Start Plotting

- - Type ***line*** in the command box then press ***enter***. Or
- Click on the ***line*** symbol
- Type in the rectangular coordinate for the reference point.
- Specify first point: 355013.495,247063.130
- Specify next point or[Undo]:type @30.50<150d17’
- Specify next point or[Close/Undo]:type @61.00<240d06’
- Specify next point or[Close/Undo]:type @30.50<330d17’
- Type ***close***
- Type ***zoom extent*** or click on ***zoom extent***

Step 6: Set Beacon

- Click on the "Beacon" button in the "Tools" panel.
- In the "Beacon" dialog box, select the desired beacon type (e.g., point, line, etc.).
- Click "OK" to set the beacon.

Step 7: Write Beacon Number

- Click on the "Text" button in the "Annotate" tab.
- In the "Text" dialog box, enter the beacon number.
- Click "OK" to place the text.

Step 8: Plot Bearing and Distance

- Click on the "Bearing and Distance" button in the "Tools" panel.
- In the "Bearing and Distance" dialog box, enter the bearing and distance values.
- Click "OK" to plot the bearing and distance.

Step 9: Plot Road

- Click on the "Line" button in the "Draw" tab.
- Draw the road centerline using the "Line" command.
- Use the "Offset" command to create the road edges.

Step 10: Plot Detail

- Click on the "Detail" button in the "Tools" panel.
- In the "Detail" dialog box, select the desired detail type (e.g., tree, building, etc.).
- Click "OK" to plot the detail.

Step 11: Set Title

- Click on the "Text" button in the "Annotate" tab.
- In the "Text" dialog box, enter the title text.
- Click "OK" to place the title.

Step 12: Set Layer to Scale

- Click on the "Layer Properties" button in the "Layers" panel.
- In the "Layer Properties Manager" dialog box, select the layer to scale.
- Click on the "Scale" button and enter the desired scale factor.
- Click "OK" to apply the changes.

Step 13: Set Layer to Border

- Click on the "Layer Properties" button in the "Layers" panel.
- In the "Layer Properties Manager" dialog box, select the layer to border.
- Click on the "Border" button and select the desired border style.
- Click "OK" to apply the changes.

Step 14: Coordinate Lines/North Direction

- Click on the "Coordinate" button in the "Tools" panel.
- In the "Coordinate" dialog box, select the desired coordinate system.
- Click "OK" to set the coordinate system.
- Click on the "North" button in the "Tools" panel to set the north direction.

Step 15: Verge the Plot

- Click on the "Verge" button in the "Tools" panel.
- In the "Verge" dialog box, select the desired verge type (e.g., grid, axis, etc.).
- Click "OK" to verge the plot.

Step 16: Plot

- Click on the "Plot" button in the "Output" tab.
- In the "Plot" dialog box, select the desired plotter or printer.
- Choose the plot scale and orientation.
- Click "OK" to plot the drawing.

CHAPTER FOUR

INTRODUCTION TO TOPOGRAPHIC SURVEY

A topographic survey is a type of survey that involves measuring and mapping the physical features of the Earth's surface. It is a crucial tool in various fields, including engineering, architecture, urban planning, and environmental science. This explanatory note provides an overview of topographic surveys, their objectives, methods, and applications.

Objectives of Topographic Surveys

1. To create accurate maps*: Topographic surveys aim to create detailed and accurate maps of the Earth's surface, showing natural and artificial features.

2. To identify landforms and features*: Topographic surveys identify and map various landforms, such as hills, valleys, rivers, and lakes.

3. To determine elevations and depths*: Topographic surveys measure the elevations and depths of different points on the Earth's surface.

4. To provide data for engineering and planning*: Topographic surveys provide essential data for various engineering and planning applications, such as road design, building construction, and urban planning.

METHODS OF TOPOGRAPHIC SURVEY

1. **Ground-based surveys: Ground-based surveys involve measuring the Earth's surface using instruments, such as levels, theodolites, and GPS receivers.**

2. **Aerial photography: Aerial photography involves taking photographs of the Earth's surface from aircraft or drones, which are then used to create topographic maps.**

3. **Satellite imagery: Satellite imagery involves using satellite data to create topographic maps.**

4. **LiDAR (Light Detection and Ranging): LiDAR involves using laser technology to create high-resolution topographic maps.**

STEPS INVOLVES IN TOPOGRAPHIC SURVEY

1. **Planning and preparation: Define the survey area, determine the survey method, and prepare the necessary equipment and personnel.**

2. **Data collection: Collect data on the Earth's surface using the chosen survey method.**

3. **Data processing: Process the collected data to create a topographic map.**

4. **Map production: Produce a topographic map, showing the measured features and elevations.**

Applications of Topographic Surveys

1. **Engineering and construction: Topographic surveys provide essential data for engineering and construction projects, such as road design, building construction, and bridge building.**

2. **Urban planning: Topographic surveys help urban planners design and develop cities, taking into account the natural terrain and features.**

3. **Environmental science: Topographic surveys provide data for environmental studies, such as flood risk assessment, soil erosion analysis, and habitat mapping.**

4. **Natural resource management: Topographic surveys help manage natural resources, such as water, minerals, and forests.**

Benefits of Topographic Surveys

1. **Accurate mapping: Topographic surveys provide accurate and detailed maps of the Earth's surface.**

2. **Informed decision-making: Topographic surveys provide essential data for informed decision-making in various fields.**

3. Improved safety: Topographic surveys help identify potential hazards, such as flood zones and steep slopes.

4. Economic benefits: Topographic surveys can help reduce costs and improve efficiency in various industries.

Challenges and Limitations

1. Complexity of terrain: Topographic surveys can be challenging in areas with complex terrain, such as mountains and forests.

2. Weather conditions: Weather conditions, such as rain and fog, can affect the accuracy of topographic surveys.

3. Cost and time: Topographic surveys can be time-consuming and costly, especially for large areas.

4. Data accuracy: Ensuring the accuracy of topographic data can be a challenge, especially in areas with limited access.

CHAPTER FIVE

5.1 EXPERIENCE GAINED

I was exposed to different fields of surveying in a wider scope by the 15 weeks industrial attachment. I participated fully in almost all the projects executed I can now boast of carrying out property survey, leveling and some managerial works.

5.2 PROBLEM ENCOUNTERED

I encountered financial support during the training

5.2 SUGGESTION FOR THE IMPROVEMENT OF THE SCHEME

Based on my experience during the SIWES program, I propose the following suggestions to improve the scheme:

- **Better Supervision and Mentoring**

- Assign experienced supervisors/mentors to guide students throughout the program.

- Regular meetings and feedback sessions to ensure students are meeting program objectives.

- **Enhanced Orientation Program**

- Conduct a comprehensive orientation program for students before the commencement of the SIWES program.

- Provide detailed information on program objectives, expectations, and evaluation criteria.

- **Improved Logistical Support**

- Provide adequate logistical support, including transportation, accommodation, and equipment.

- Ensure that students have access to necessary resources and facilities.

- **Regular Evaluation and Feedback**

- Conduct regular evaluations and feedback sessions to assess student performance.

- Provide constructive feedback to students to improve their performance.

5.3 RECOMMENDATION

There is no doubt that some students during their Industrial Training do not have the opportunity of being exposed or intentional do not attend SIWES PROGRAMED.Those external supervisors should be sent to the various industrial training attachment

areas and centers to find out if the Industrial Training is suitable and functional or even

at times do not see any place of attachment.