



UNITED REPUBLIC OF TANZANIA
ENGINEERS REGISTRATION BOARD



FINAL PROFESSIONAL TRAINING REPORT
A FULFILMENT FOR REGISTRATION AS PROFESSIONAL
ENGINEER

YOUR ENGINEERING DISCIPLINE

By: NAME (Trainee)
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MM, YYYY

Cover page

Table of Contents

CHAPTER ONE

1.0 INTRODUCTION

- Summary of your academic and professional training background.
- Maximum of one page.

CHAPTER TWO

2.0 Summary of Professional Training

| Period | Detail of Projects/Activities | Duration (Months) | Supervisor | |
|---------------------------|--|----------------------|------------|-----------|
| | | | Name | Signature |
| March, 2014 to date | EMPLOYER: Position: Trainee Project: Activities undertaken were: - <ul style="list-style-type: none"> i. Preparation of annual maintenance plan ii. Prioritizing the road to be maintained iii. Prepare 3year strategic plan for road works iv. Conduct Annual District Road Inventory and Condition Survey. v. Categories maintenance work into difference interventions i.e. Periodic, Spot improvement and routine maintenance. | 9 | Eng. | |

CHAPTER THREE

3.0 DETAILS OF PROFESIONAL TRAINING UNDERTAKEN

3.1 Project: Design of bridge along Dodoma – Mayamaya Road (214km)

3.1.1 Project Particulars

Client : TANROADS-Dodoma

Project cost : Tshs. 650 million

Consultant : A.C.E Consultants Ltd

Position held : Trainee

Period : 3 Months

3.1.2 Project description

- Introduction of the project
- objective

3.1.3 Relevant Bridge regulation and design standards

[Codes]

§ BS 5400 of 1982

§ SATCC Code of Practice for design of Road Bridges and Culverts 1998 reprinted in July 2001.

§ Overseas Road Note 9 Design Manual for small Bridges, 2000.

§ TRRL EAFM procedures described in Report No.706 for catchments with sizes up to 200 km².

[Software]

§ Excel calculation sheets

§ Master series

3.1.4 Scope of the Works

To carry out of feasibility study so as to prepare design equitable for a bridge of total length of 33m long, Design and preparation of detail drawings, prepare bills of quantities; cost estimation, preparation of proposal to solicit funds and preparing tender documents.

3.1.5 My involvement in this Project:

Working as a District Engineer in this project I performed the following activities,

(a) Carrying out of feasibility study for the bridge

- i. Involved in preliminaries checking of the site condition.
- ii. Checking the population data for communities who will benefit from the implementation of the project.
- iii. Discuss with community on the river characteristics history.
- iv. Select the appropriate construction site as per road alignment.
- v. Conducting Topographic Survey.
- vi. Road Vertical Alignment correlating with bridge.
- vii. Selecting the economical span length of the structure.
- viii. To check the vertical clearance and water-cross area
- ix. Selecting bridge type was influenced with the existing condition.
- x. Proposing means for river revetment and protection from scouring using stone masonry wing walls.

(b) Preparing project proposal for the project to solicit funds. The proposal was written and submitted to the Ministry of Finance Dar es salaam office. The proposal covered the following components:

- i. Executive summary
- ii. Introduction and background
- iii. Project objectives
- iv. Project organization, management and implementation
- v. Project output and market
- vi. Project Benefit and Justification
- vii. Environmental Impact Assessment (EIA):
- viii. Conclusion and endorsement.
- ix. Annexes (attached with District road network map to show location of bridge, BoQ, Drawings and site photos.)

3.1.6 Detail design and preparation of detail drawings

After collection of all necessary information and data during feasibility study, organization of these data and start design work in the following procedures:

3.1.7 Challenges encountered and Solutions

- Challenge
- Solutions

3.1.8 Quality Attained

3.1.9 Experience Gained

The experiences gained during my designing practice were: -

- a) The use of TRRL Model developed by the UK Transport and Road Research Laboratory on physical reasoning of the hydrological interactions between rainfall and runoff. Combination of data or information on area, land and channel slopes, catchment type, soil type, vegetation cover and rainfall zone from the existing map were used to estimate peak flood at channel existing.
- b) To be more familiar with structural design codes such as BS 5400 of 1982, SATCC Code of Practice for design of Road Bridges and Culverts 1998 reprinted in July 2001, Overseas Road Note 9 Design Manual for small Bridges, 2000.
- c) Loading of members differs to live loads from slab to beam where by the beams live include knife edge load
- d) Capability on combining design loads for the all cases (at Ultimate and serviceability limit states).
- e) Checking the suitability of structural members against bending moment, shear force and crack control.
- f) Designing of structural members in respect with determination of dead and live loads, identification of free body diagrams (FBD)/statistical system, dimensioning and determination of appropriate assumptions for design.
- g) Preparation of working drawings and bar bending schedule.
- h) Proposing good site for the bridge.

CHAPTER FOUR

4.0 Conclusion

As I have narrated above in this report, I have gained adequate Professional experience in Civil Engineering works (design, site supervision and office management) as well as knowledge in procurement matters, project management and contracts administration. I have now managed to bridge theories and reality on site. I have faced many challenges while implementing projects and I have also been able to look for the solution to those problems.

Further I certify that, this report results from my involvement in various civil engineering works carried out and is not copied from any unauthorized materials and thus the activities written in this report were carried out under close supervision of Professional Engineers.

With regard to the professional engineering experience I have gained so far, I finally wish the Engineers Registration Board to consider, evaluate and approve my application for registration as Professional Engineer.

Name:

Signature:.....

Date:.....

CHAPTER FIVE

5.1 Endorsement

I, the undersigned, have gone through the report that has been prepared and we endorse the experience attained and reported by the writer. Based on our personal knowledge of the character and professional reputation of the applicant, I recommend for acceptance of this professional training report by the Engineers Registration Board in fulfillment of the requirements for registration as Professional Engineer.

Name

Stamp and Signature

5.2 Endorsement

I, the undersigned, have gone through the report that has been prepared and we endorse the experience attained and reported by the writer. Based on our personal knowledge of the character and professional reputation of the applicant, I recommend for acceptance of this professional training report by the Engineers Registration Board in fulfillment of the requirements for registration as Professional Engineer.

Name

Stamp and Signature

APPENDICES

Design Calculations - To be signed and stamped by a Professional Engineer on every page.

Design Drawings - To be signed and stamped by a Professional Engineer on every page.