

CHAPTER 1

INTRODUCTION

1.1 Background

MBKM internship program has given the authors the opportunity to participate in the civil engineer world. This program cooperates with PT. Total Bangun Persada as one of the biggest contractor companies in Indonesia. The placement chosen from the company is at Novotel Hotel BSD project. This project consists of 2 basements, ground floor, mezzanine, upper ground, and tower consists of 13 floors and crown (roof). Therefore, this project is categorized as one of the high-rise building projects which has various difficulties from basement until its highest floor. Novotel Hotel BSD is a hotel building for people who usually love to travel and need place to take a rest or visit BSD. This hotel has swimming pool, gym, and ballroom that can be used for wedding, gathering places or many other activities. This hotel also has restaurants which can be accessed by the guests for lunch or dinner.

The authors chose the analysing design of retaining wall as the Final Project Infrastructure II topic. Basements of this project covered by the retaining wall which act as the slab because of its clamped with the beam and the lowest reinforcement is connected to the pile cap of the building. This topic is checked and analysed by the authors using the reinforcement data from the consultant and the data of the soil on the project. The analysis is using SNI 2847:2019 as the basis for the reinforcement design of the retaining wall.

1.2 Problem Statements and Limitations

There are several statements and limitations of analysis design on this topic. The lateral earth pressure of the soil needed to be analysed because it acts as the loadings occurred on the retaining wall. Based on analysis data of the lateral earth pressure, the analysis design of the retaining wall reinforcement can be continued. Since the usage of the retaining wall in this project is only to resist the soil on entering the basements, the earthquake loading is not analysed due to its usage limitation of the retaining wall. The author only analysed the design from the construction consultant based on the data from soil tests and the reinforcement data that has already been applied on the project. The retaining wall analysed is from top of the basement 1 until basement 2.

1.3 Purpose and Objectives

Purpose and objectives of this report are defining the lateral earth pressure on the boring log 2 and analyse the design of the retaining wall from basement 2 until top of the basement 1 until basement 2.

1.4 Benefits

This report is useful for authors obtaining more knowledge, information, and experiences on the contractor work professionalism and understanding about the principles of retaining wall in the real world.

