



# TAYLOR'S UNIVERSITY

Wisdom • Integrity • Excellence

## **SCHOOL OF ARCHITECTURE, BUILDING & DESIGN**

**Research Unit for Modern Architecture Studies in Southeast Asia**

**Bachelor of Science (Honours) (Architecture)**

**Building Structures (ARC 2522)**

**Project 2: Extension of a R.C. bungalow**

**(19<sup>th</sup> June 2014)**

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## **CONTENT**

**1.0 Introduction of Case Study**

**2.0 Architectural Drawings**

**3.0 Structural Drawings**

**4.0 Conclusion**

## Introduction

The case study is carried out on a 2-storey detached Bungalow House in Kota Seriemas. Kota Seriemas is a 2,400-acre township situated in Nilai, Negeri Sembilan, close to the transportation hub of KLIA / KLIA2. This township with a target population of 60,000 is based on the concept of eco-friendly and wholesome living, where residential homes and commercial businesses co-exist within their lush, natural surroundings. Residents enjoy resort style living with amenities such as an 18-hole golf course, beach soccer, basketball and sepak takraw pitches and a beautiful 88-acre linked park, Laman Ilmu.

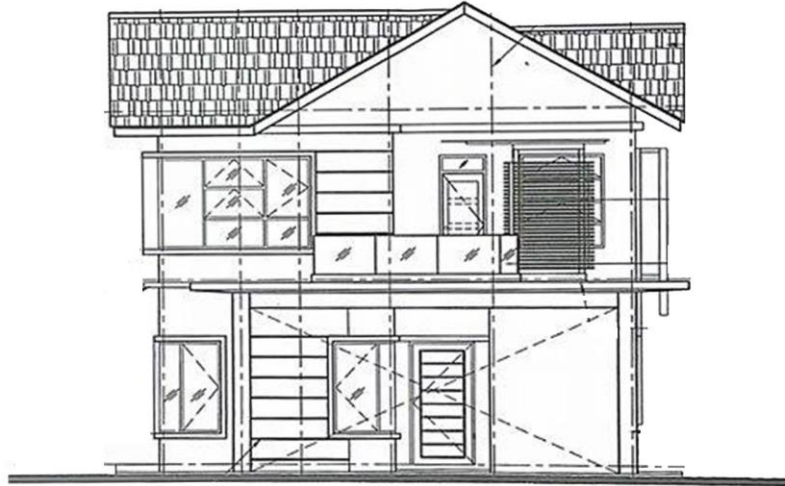
The bungalow comprises of a land area of 3650sqf and a built up area of 2715sqf with a reinforced concrete structure. It consists of 4 bedrooms.



This case study analyses the structural plans of the bungalow. The structural floor plans are obtained from the analysis of the architectural floor plans. The sizes of beams, columns and slabs are studied in order to propose the extension. A documentation on the structural system is produced to understand and explore the concept of structural analysis. The analysis is then used to identify the structural components of the bungalow.

# Architectural Drawings

## Front Elevation



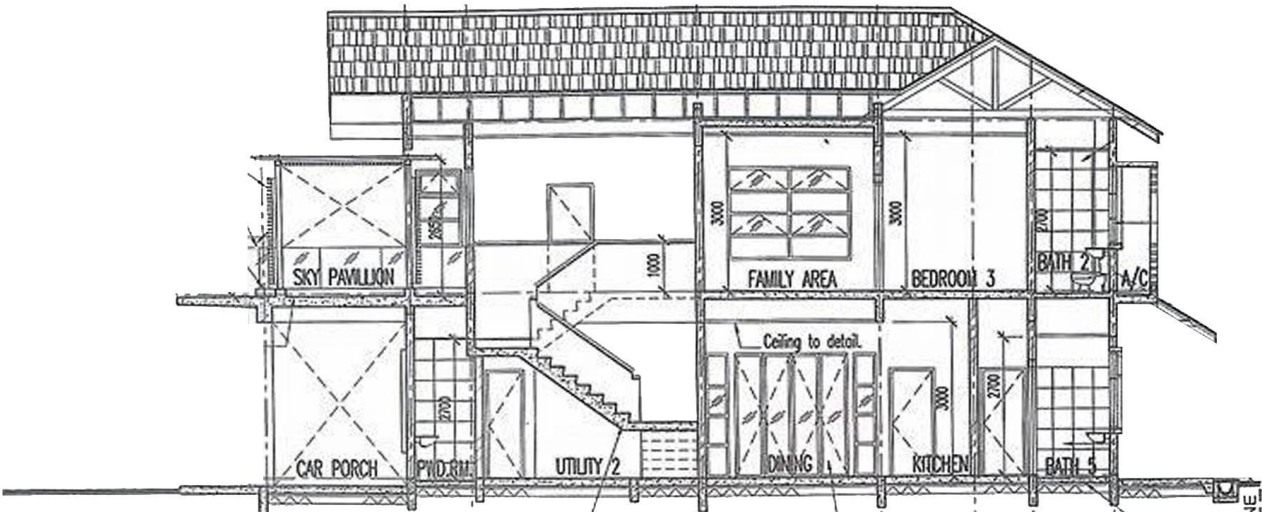
## Left Elevation



Right Elevation

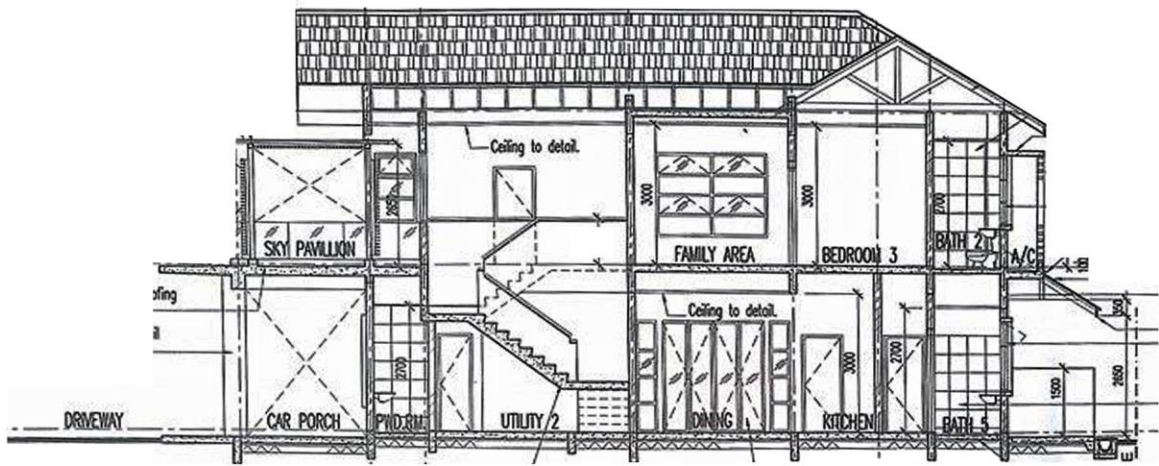


Section 1

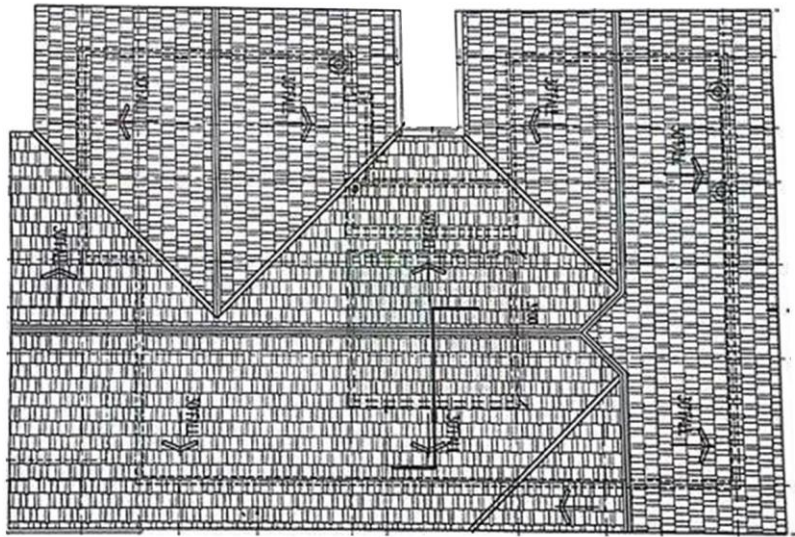




Section 2

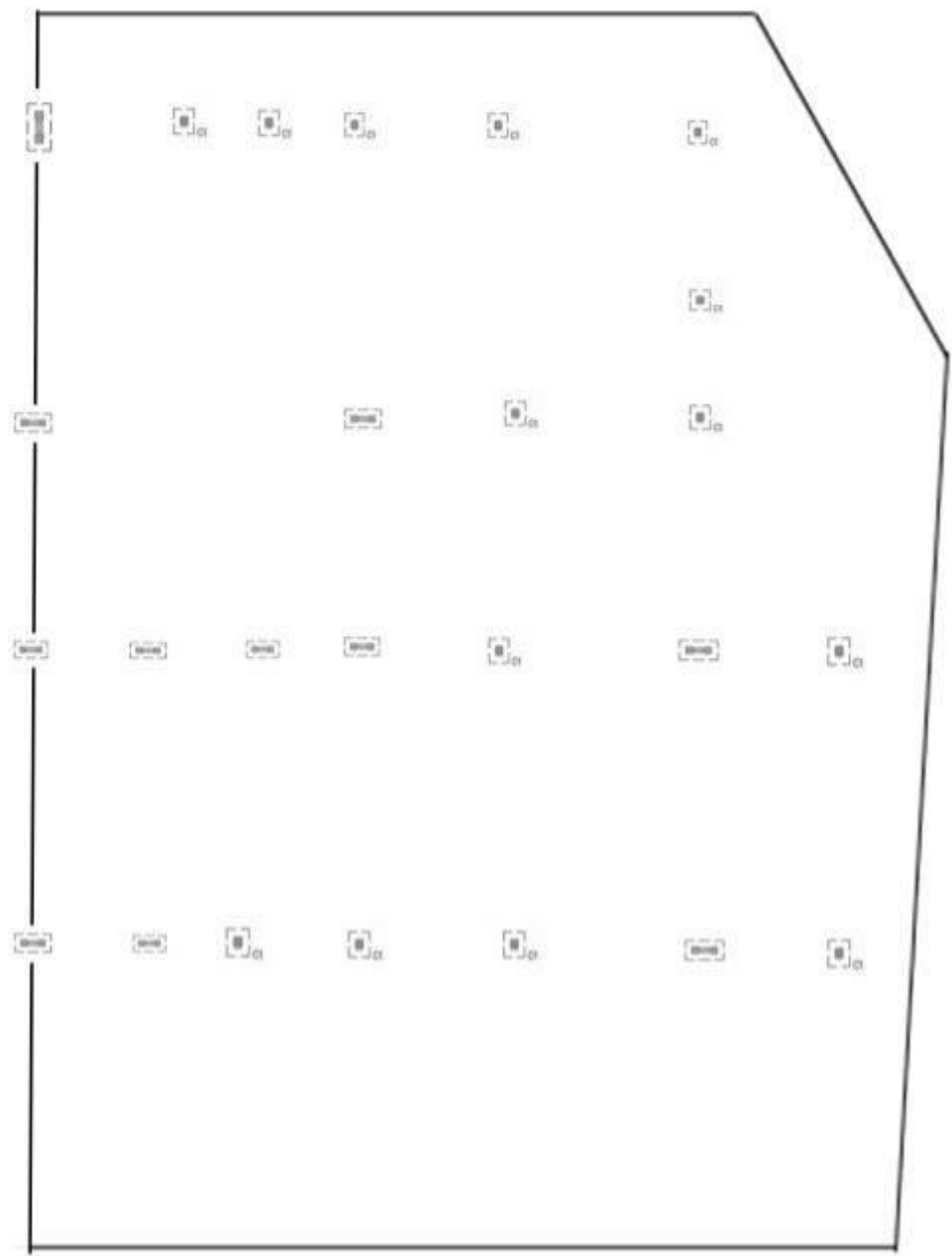


Roof Plan

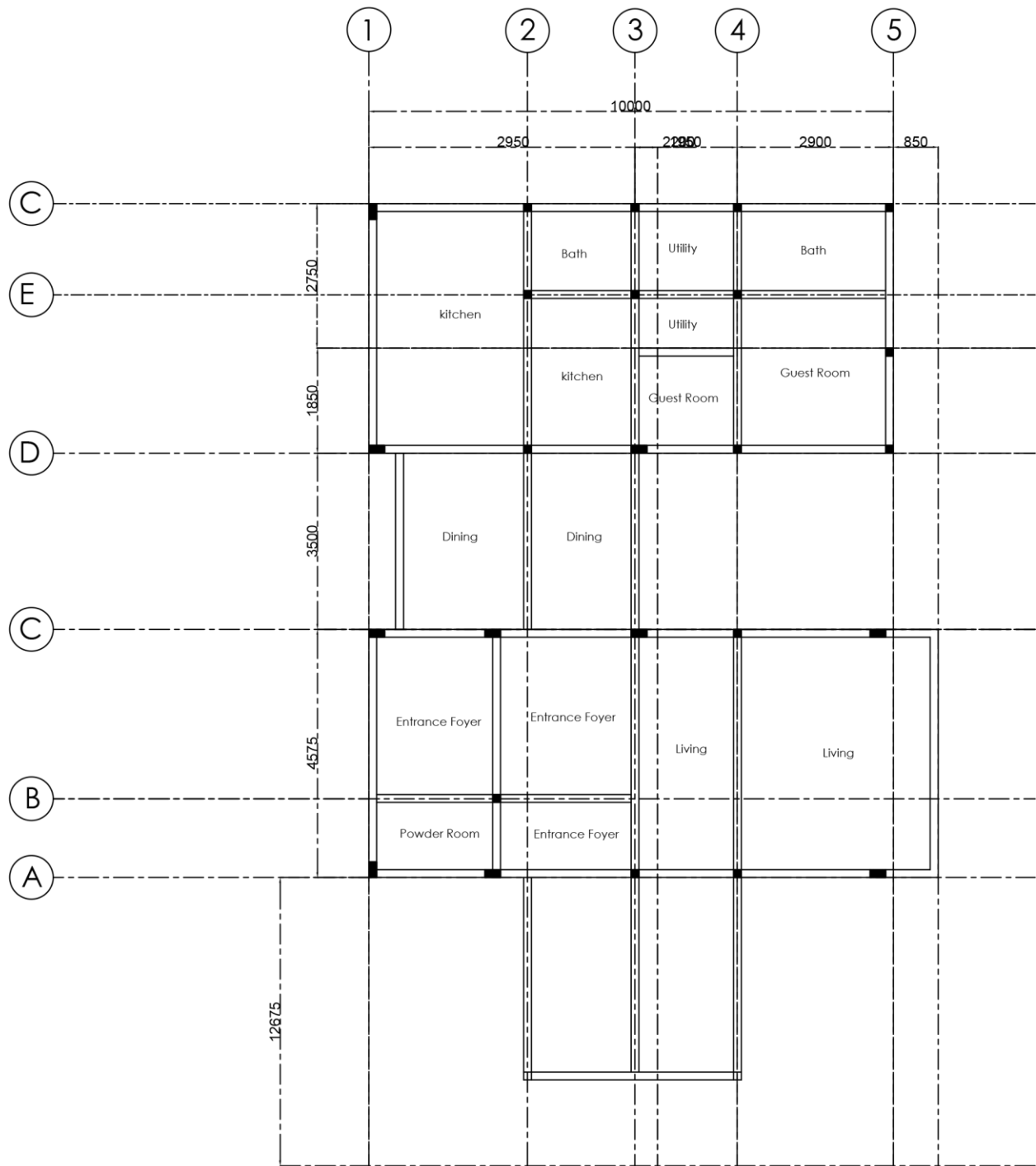


# Structural Drawings

## Foundation Plan

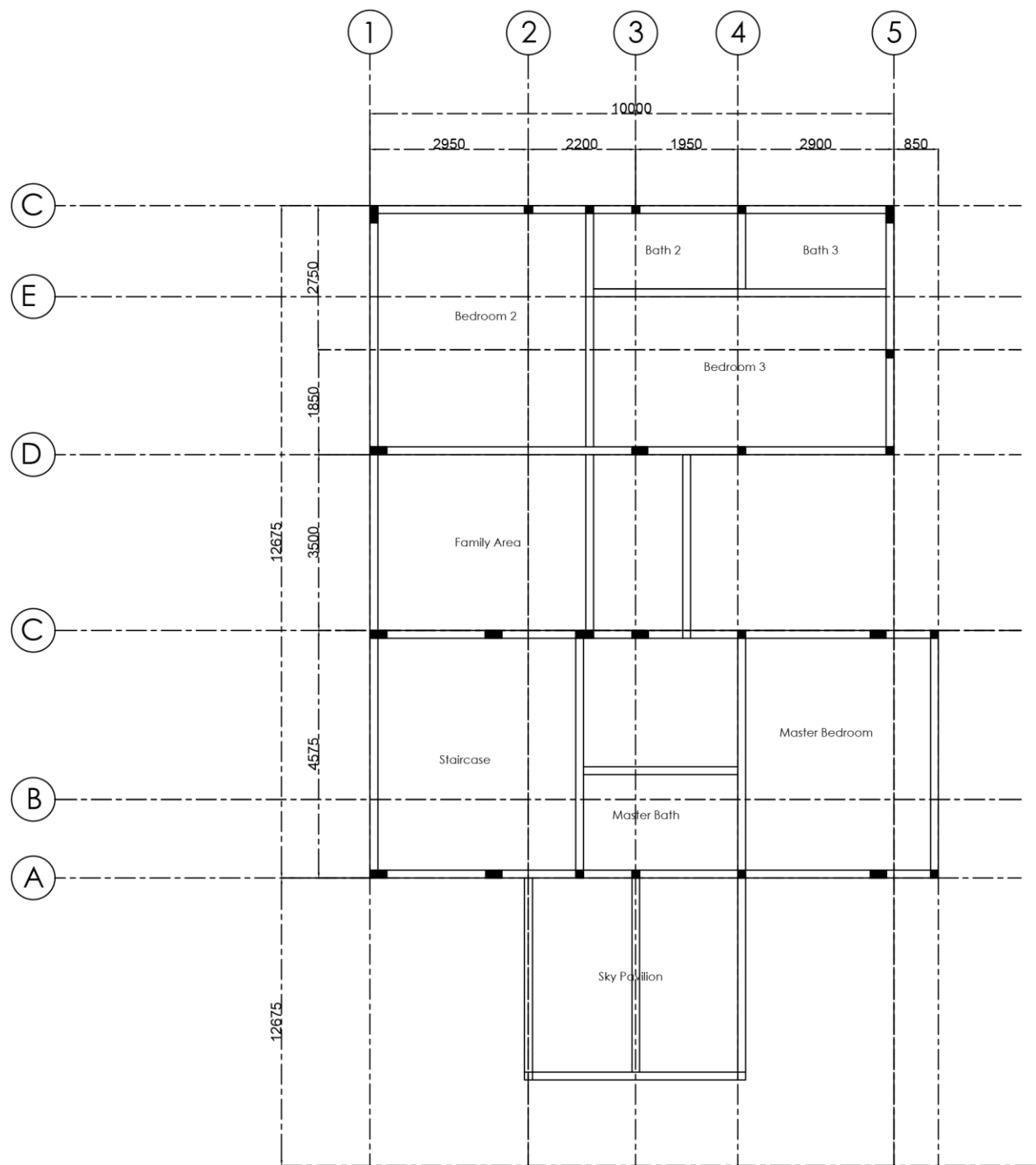


Ground Floor Plan





First Floor Plan



## **Conclusion**

This case study strengthened our knowledge on the process of building structures design.

Through structural evaluation by identifying the structural members, we have increase our understanding on basic structure layout as well as considerations on beam and column sizing that will affect the integrity of a structure.