

PROPOSED REINFORCED CONCRETE DESIGN OF THE
TWO-STOREY BACHELORS' APARTMENT AT
CAVITE STATE UNIVERSITY, DON
SEVERINO DELAS ALAS CAMPUS,
INDANG, CAVITE

DESIGN PROJECT

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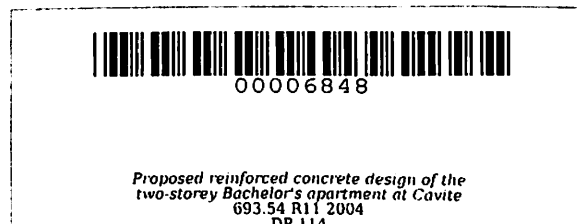
Indang, Cavite

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TWO-STOREY BACHELORS' APARTMENT AT CAVITE STATE
UNIVERSITY, DON SEVERINO DELAS ALAS CAMPUS,
INDANG, CAVITE**

Undergraduate Design Project
Submitted to the Faculty of the
Cavite State University
Indang, Cavite

In partial fulfillment
of the requirements for the degree of
Bachelor of Science in Civil Engineering



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ABSTRACT

RACASA, JANICE L, and MAAH ANNE V. REYES, Proposed Reinforced Concrete Design of the Two-Storey Bachelors' Apartment at Cavite State University, Don Severino delas Alas Campus under graduate Design Project. Bachelor of Science in Civil Engineering, Cavite State University, Indang, Cavite. April 2004. Adviser: Engr. Renato B. Cubilla.

The design project Proposed Reinforced Concrete Design of the Two-Storey Bachelors' Apartment at Cavite State University, Don Severino delas Alas Campus was conducted at Cavite State University, Indang, Cavite from October 2003 to February 2004. Specifically, it aimed to enhance the knowledge in reinforced concrete design of the two- storey building. It provided the necessary documents such as architectural plan, design computation of concrete two-storey building, storm sewer, sanitary sewer, drainage system, plumbing and electrical layout and as reference of the administration for the future implementation of its constructions and develop a scaled miniature model.

The total area covered by the design was 912 sq. m and composed of 17 duplex units with the total lot area within its property line of 1938 sq.m.

The reinforced concrete design of two-storey building was based on the output of Structural Aided Analysis Design (STAAD Pro), the standard prescribed in National Structural Code of the Philippines (NSCP), ACI Code and specification for Ultimate Stress Design (USD). The principles and considerations in designing the two-storey building were safe, aesthetic and economical.

A scaled model was developed to view the outcome of the design project.

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DON SEVERINO DELAS ALAS CAMPUS^{1/}**

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INTRODUCTION

Every year, there is an average increase of 20 percent in student population. It means that there is a need for additional faculty members and employees with this increasing studentry (Office of Student Affairs).

For S.Y. 2003-2004, there are 306 faculty members and employees from different colleges in the university, 86 or 28 percent of these are singles and 10 percent came from provinces outside Cavite like Batangas, Laguna, Quezon, Rizal, Mindoro, and Nueva Ecija. These single employees and faculty members need adequate housing in their stay in the university. Thus, the authors proposed to design a reinforced concrete two-storey bachelors' apartment in Cavite State University Main Campus.

There is a proposed site for the said building approximately 931 sq. m., where the university canteen and marketing center are presently located. Opinions from selected