

**SITE DEVELOPMENT PLAN OF RECREATIONAL FACILITY OF
BRGY. ALULOD, INDANG, CAVITE**

Design Project

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**SITE DEVELOPMENT PLAN OF RECREATIONAL FACILITY OF BRGY.
ALULOD, INDANG, CAVITE**

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ABSTRACT

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The study was conducted from December 2018 to March 2019 at the College of Engineering and Information Technology, Cavite State University, Indang, Cavite to provide a site development plan of recreational facility in Brgy. Alulod, Indang, Cavite. Specifically, it aimed to: 1. Conduct a site investigation; 2. Enhance the researchers' ability in surveying, planning and designing.; 3. Provide a development plan of the site of the swimming pool.; 4. Design a pipe system, pumping system, water tank and majorly a swimming pool in the site within the barangay.; 5. Prepare water supply layout of the proposed design of the swimming pool.; 6. Proposed a structural design and analysis of the swimming pool.; 7. Prepare a detailed cost estimate of the proposed site development plan.

Interview of the residents and resource persons were conducted to know the current condition of the site. The length and exact location of the proposed site location were determined through surveying. Researches were also conducted to gather information for the structural analysis and design of swimming pool.

The study provided the architectural and structural details of the proposed site development plan for recreational facility of Barangay Alulod, Indang Cavite which have an overall area of 370.1286 square meters. Architectural plans included the site elevation, admin building plan, swimming pool plans; structural plans included the wall and base of

swimming pool. Different references were used to gather standard requirements and required data for the design and analysis of swimming pool. Some civil engineering books or structural engineering books such as Besavilla, Gillesania, and McCormack were used as reference.

The design of the structural members was based from the requirements and specification of National Structural Code of the Philippines 2015 (NSCP), Rules and Regulation of Chapter VIII “Public Swimming or Bathing Places” of the Code on Sanitation of the Philippines (P.D. 856). According to the design computation and analysis, it can be concluded that all section and materials used were safe, efficient and economical.

The estimated total cost of the proposed site development plan for recreational facility is P543,743.93.

The authors recommend an in-depth study about the design and structural analysis of swimming pool and also to conduct a comparative analysis between manual computation and software simulation results in the analysis.

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INTRODUCTION

Indang is a 1st class municipality in the province of Cavite, Philippines. According to the 2007 census, it has a population of 60,755 people in a land area of 100.2 square kilometers. It is bounded on the north by the municipality of Naic and the city of Trece Martires, on the south by the municipality of Mendez and the city of Tagaytay, on the west by the municipalities of Alfonso and Maragondon, and on the east by the municipality of Amadeo and the city of General Trias. Indang is politically subdivided into 36 barangays including the Alulod which is the location of the study. The barangay alulod has a total area of approximately 645.0612 hectares and a population of approximately 5 174 people.

The native name of the place is “Alolod”, The planting bamboo at different points of this place was ordered by ex-gobernadorcillo Alejandro de Ocampo is 1851. Later, it