

REHABILITATION AND IMPROVEMENT OF EXISTING
WATER SUPPLY SYSTEM OF BRGY. DE OCAMPO,
TRECE MARTIRES CITY

Design Project

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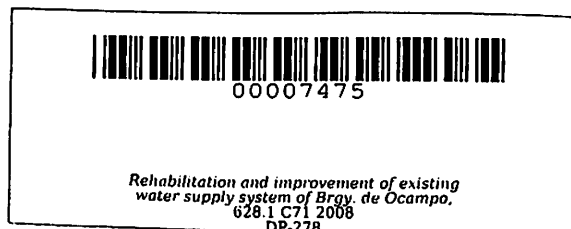
College of Engineering and Information Technology
CAVITE STATE UNIVERSITY
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**REHABILITATION AND IMPROVEMENT OF EXISTING
WATER SUPPLY SYSTEM OF BRGY. DE OCAMPO,
TRECE MARTIRES CITY**

Undergraduate Design Project
Submitted to Faculty of the
Cavite State University
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In partial fulfillment
of the requirements for the degree of
Bachelor of Science in Civil Engineering



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ABSTRACT

COLORADO, ROSELITO A. MANALO, LUIGI LINDELL M.,
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The design project for the rehabilitation and improvement of existing water supply system of Barangay De Ocampo, Trece Martires City was conducted from July 2007 to February 2008. It was evaluated on February 2008 at the Cavite State University.

The proposed rehabilitation of existing water supply system of Barangay De Ocampo, Trece Martires City, Cavite was composed of Pipe network analysis, design of elevated concrete reservoir, and cost analysis of an elevated concrete reservoir and elevated steel reservoir.

The design of the reinforced concrete reservoir was done using Structural Aided Analysis and Design (STAAD), the standard prescribed by the National Structural Code of the Philippines (NSCP), and American Concrete Institute (ACI) Code and Specification for Ultimate Stress Design (USD). The design was provided with Structural plans and detailed cost estimates. The design of the concrete reservoir was prepared based on the following consideration; safety, its aesthetic value, and the most economical design.

A scaled model was developed present the physical overview of the outcome of the design project.

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**REHABILITATION AND IMPROVEMENT OF THE EXISTING
WATER SUPPLY SYSTEM OF BARANGAY DE OCAMPO,
TRECE MARTIRES CITY^{1/}**

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INTRODUCTION

The rise in consumption of water has been remarkably rapid as mankind progresses in its economic and social improvement. It is quite certain such upswing tendencies will be maintained and in many instances accelerated. Human demand for water will escalate with time.

Water is very essential to life. It comprises 75 percent of the world, but only one percent of it is potable and safe to drink. (*David, 2000*)

Trece Martires City is located at the center of Cavite Province. The city is now becoming industrialized with the influx of many investors. Aside from this, the city serves as the dormitory of workers from the different factories and industrial establishments in Export Processing Zone (EPZA) at Rosario Cavite and First Cavite