

**DESIGN OF A FOUR LANE TRUSS BRIDGE CONNECTING
POBLACION 4, TANZA AND TEJERO, ROSARIO,
AND GENERAL TRIAS, CAVITE**

Undergraduate Design Project
Submitted to the Faculty of
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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*Design of a four lane truss bridge
connecting poblacion 4, Tanza and Tejero,
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ABSTRACT

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The design project was conducted at Tanza, General Trias and Rosario, Cavite from October 2004 to March 2005. It was presented on March 3, 2005 at the Acoustic Room of the College of Engineering and Information Technology, Cavite State University.

The design project aimed to apply the knowledge acquired through years of study in the design a Four-Lane Truss Bridge and to be able to prepare a complete architectural and structural plans and layouts, together with its miniature model and detailed cost estimates.

Structural Aid Analysis and Design (STAAD Pro.) software was used for the general analysis of the superstructure members. Ultimate Strength Design (USD) was used for the design of the roadway slab, sidewalk and abutments while Allowable Stress Design (ASD) was used for the design of the steel truss members, stringers and floor beams.

The truss bridge has a span of forty meters with four traffic lanes in which all are being supported by eight floor beams. The bridge was design to carry a maximum load of 20-ton truck with a 16-ton semi-trailer.

A thorough analysis of the design guidelines, procedures, and specifications were applied in the study. The parameters used in the study were carefully studied and determined so as to arrive to an efficient and effective bridge design.

The design project exhibited limitations, requirements, principles and considerations in designing a Forty-Meter, Four-Lane Truss Bridge.

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