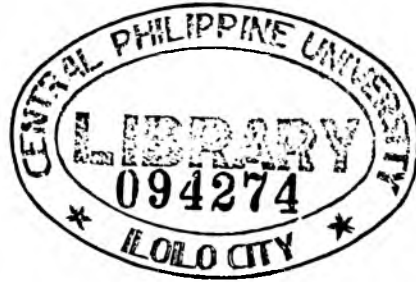


**A STUDY ON THE IMPROVEMENT OF THE DRAINAGE SYSTEM
BESIDE CENTRAL PHILIPPINE UNIVERSITY, ILOILO CITY**

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**A Special Problem Submitted to the
School of Graduate Studies
In Partial Fulfillment of the Requirements For The Degree Of
Master of Engineering**

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CHAPTER 1

INTRODUCTION

Sewerage system is important to the community for certain reasons. First, it is necessary for safeguarding the people's health. If there is no proper drainage system, water will stagnate and the stagnant water becomes breeding place for harmful insects. Second, it is necessary for proper discharge of wastewater, rain water and run-offs and for efficient flood control. Third, efficient sewerage system contributes to the aesthetic conditions of the environment.

Some city system use one sewer network for domestic and industrial wastewater, and another for rainwater, which emptied without treatment into the local waterway. This separation ensures that no foul sewage is discharged into a waterway without treatment. However, in the City of Iloilo, there is only one sewer system for domestic and building wastewater and rainwater. Surface water enters a sewer system through inlets located in the street gutters or depressed areas that collect natural drainage. The amount of storm water reaching a given sewer depends upon the rate of rainfall which flows off and the time taken by a raindrop after falling to reach the point under consideration.

There is an existing drainage and sewerage system in the City of Iloilo. However in some districts, the systems do not function well, especially during heavy rains. Flooding of streets is very common. One particular place is at Lopez Jaena Street, district of Jaro, near Central Philippine University, even though repairs and improvements were made last summer 1997.

Before the repair last summer 1997, after about twenty minutes of heavy rains, the water level in the street suddenly rose to about between fifteen to forty centimeters. The sidewalk became impassable and some vehicles got stacked-up resulting to traffic jam. Students in order not to be late for classes were forced to walk or cross the flooded street or if they had to take the jeep, their footwear got wet when alighting from the jeep. The system cannot drain surface water efficiently. However, solid garbage clogged the aqueducts, thus obstructing the

flow of water. Water stagnated providing haven to harmful insects especially mosquitoes.

Presently, although the drainage system was improved, the water level in the street rises suddenly during heavy rains. This study aims to further improve the system so as to reduce if not totally eliminate the water level in the street during heavy rains.

1.1 PURPOSE OF STUDY

1.1.1 GENERAL OBJECTIVES:

An efficient drainage system is very important for the safety and comfort of the CPU community, particularly the more than eleven thousand students, faculty and staff of CPU, as well as for vehicles and daily commuters passing Central Philippine University.

The general objective of this study is to investigate the existing drainage system of the area and if found unsatisfactory, recommendations will be made after the investigation.

1.1.2 SPECIFIC OBJECTIVES:

The study further aims to:

1. investigate the factors affecting, directly or indirectly, the system so that corrective measures could be done.
2. present to concerned authorities the results of this study.
3. find out the effects of the improvement of the drainage system to the CPU community, commuters and vehicle drivers on their daily activities.