DESIGN OF RAINWATER HARVESTING SYSTEM OF THE 2-STOREY ACADEMIC BUILDING FOR THE COLLEGE OF ENGINEERING AND TECHNOLOGY, ROMBLON STATE UNIVERSITY (MAIN CAMPUS)

A Thesis Presented to the
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Odiongan, Romblon

In Partial Fulfilment of the Requirements for the Degree
Bachelor of Science in Civil Engineering

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ABSTRACT

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The study was conducted in order to present a workable alternative source of water in order to sustain all the water demand that the proposed building would be needed. The implementation and construction of the rainwater harvesting system for the 2-storey academic building for the College of Engineering and Technology will be a great help for the college itself and also for the university in terms of water bill.

Review of the building plans and site visit of the area were done to gather the necessary data. Volume of tank has been calculated with most appropriate method of estimation and considering the suitable design of the tank. There will be two cistern and overhead tank that will be proposed in College of Engineering and Technology Academic Building. A cistern tank with a capacity of 36 m^3 with a

dimension of 6m x 3m x 2m also overhead tank with a capacity of 18 with a dimension of 3m x 3m x 2m, therefore the total volume of the cistern tank is $72m^3$ and the overhead tank is $36m^3$. The proposed project will need a total of 45 pcs. 4" diameter PVC Pipes for the conveyance piping. For water distribution, 8pcs. ¾" diameter PVC Pipes and 11 pcs. 1" diameter PVC Pipes (6m long) will be needed and for the fittings it will be needing 8 pcs. ¾" diameter Tee Pipes and 10 pcs. 4" diameter elbow will be needed. The result of the study also shows the estimated cost of Php. 1,327, 810.00, within 40 calendar days.