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THE F.L.O.A.T. HOUSE  
FLOOD-TOLERANT LIGHTWEIGHT-STRUCTURE OPTIMIZING AMPHIBIOUS TECHNOLOGY

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The need for an adaptive, feasible, and time relevant study has attained its zenith in these most pressing times. This thesis study which is based on these considerations is dedicated to materializing a means of revolutionizing engineering design which can cater housing indispensability in an environment of unpredictable possibilities.

The problem of alleviating the hazardous effects of flooding in the most vulnerable communities in the Philippines is the core concern of this study. The proponents deemed this study as significant as it aimed to develop a safe, flood-proof house and to develop communities that will function at ease even in the presence of natural disasters particularly flooding.

The FLOAT House (Flood-tolerant Lightweight-structure Optimizing Amphibious Technology) is proposed as a new strategy on how to mitigate flood. The project is designed to float on a buoyant foundation, supported by rollers on its corners to maintain stability, and return to the ground when water regresses. The likelihood of this scenario assumed that if housing is subjected to this revolutionized design, then, many casualties will be saved at times of sever environmental catastrophes.

Out of the test results obtained by the proponents, the feasibility of this study lied in the finding that the Volume Draft of the water drums did not vary on the quantity of water that surrounded it when three experiments were conducted on objects that represented the weights that the structure could load in. however, the scope of such feasibility was delimited to the provisions of the National Structural Code of the Philippines (NSCP) 2010 Edition and Association of Structural Engineers of the Philippines (ASEP) Steel Handbook 2004 thus further restricting the possible implementation of the structure in the event that it will be proposed as a viable housing project to prospected developers either governmental or non-governmental organizations.

Although the proponents, for the entirety of this study, recommended options to improve the structure, it is generally concluded, especially based on the findings obtained, that this study is feasible given the right treatment and under conducive environment.