

2017

## Sinatra Living: Project Overview

University of Nevada, Las Vegas. Solar Decathlon Team.

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Team Las Vegas is proposing an elegant, sustainable, and innovative home design that aims to be a prototype home for retirees living in the 21st century as part of participation in the Solar Decathlon 2017 hosted by the U.S. Department of Energy. The home will be constructed on the UNLV campus and transported and tested at the Solar Decathlon 2017 competition at a location to be determined by the Department of Energy.

Team Las Vegas's conceptual design is a house designed to allow retirees to live independently, while providing a seamless transition into assisted care. The home offers residents a home-like and comfortable atmosphere and a sense of safety. Not just a smart home, the home is "intelligent", by monitoring and sending real-time data to one's doctor. Currently, an effective and marketable home that targets retirees does not exist. UNLV aims

Team Las Vegas is a collaborative consisted of students and faculty from Architecture, Business, Communications, Engineering, Social Work, and Health Sciences. The two-year effort will be integrated into several education programs, including the Solar and Renewable Energy Minor and Renewable Energy Graduate Certificates, the School of Architecture, and the Engineering Senior Design courses. In addition, industry support is provided through the Architecture and Engineering Advisory Boards, and through existing partnerships with industry. The final outcome of the project will be a home that is tested in competition, and brought back to Las Vegas for continued research by Nevada's medical field.

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For the 2017 Solar Decathlon, Team Las Vegas is proposing a 21<sup>st</sup> century Aging-In-Place home that exemplifies the need for spaces to support orientation, executive functions and memory, and productivity management of daily physical and mental activities for retirees. The home's design strategies for active aging will be constructed on the UNLV campus and tested at the Solar Decathlon 2017 competition site.

Team Las Vegas's design strategies are driven by quantitative evidence-based design in the scope of an aging-in-place demographic. In Nevada, the senior citizen population grew more than 50% over the past decade and is predicted to comprise a fourth of the state's population by 2030. Many of these retirees will need living environments that are fundamental to care, therapy, and active aging. Thus, the quality of the designed environment has the potential to be innovative and integral to new technologies that may improve one's health. Our home offers the ability to actively engage and monitor the user's health, while still creating an ambiance of independent living. In today's housing market, our design may resolve the need for actively aging populations to find spaces that support their lifestyles and allow them to continue living long, purposeful lives.

Through the collaboration of multiple colleges and departments at UNLV, we are able to make this project a success. Team Las Vegas is an exhaustively interdisciplinary team consisting of students and faculty from Architecture, Business, Communications, Engineering, Social Work, and Health Sciences. This two-year effort will be integrated into several education programs, including the Solar and Renewable Energy Minor and Renewable Energy Graduate Certificates, the School of Architecture, and the Engineering Senior Design courses. In addition, industry support is provided through the Architecture and Engineering Advisory Boards, and through existing partnerships within our industry. The final outcome of the project will be a home that is tested at the competition site, and brought back to Las Vegas for continued research by Nevada's medical field.