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STRUCTURAL OPTION
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UNIVERSITY OF CENTRAL FLORIDA'S ACADEMIC VILLAGES
ORLANDO, FL



EXECUTIVE SUMMARY

The 4 story complex in University of Central Florida is cast in place concrete structure with reinforced masonry shear walls and a shallow foundation system. The roof is a hip roof composed of a combination of trusses supporting metal decking.

The main codes used for the design of the Academic Villages are the 1999 Standard Building Code (SBC), American Institute of Steel Construction (AISC) Load and Resistance Factor Design (LRFD), Specifications for Structural Concrete (ACI 301), and Specifications for Masonry Structures (ACI 530.1). The materials are specified by the American Society for Testing and Materials (ASTM).

I calculated the design loads using ASCE 7-02 and found the design loads in the structural drawings to be less than what I calculated using ASCE 7-02. Due to the location, I expected the wind loads to be significantly greater than the seismic loads. However, this is not consistent with my calculations. I will be investigating this concept further.