

THE ODYSSEY

ARLINGTON, VA



Aaron Snyder

Structural Option

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Executive Summary

The Odyssey is a 475,650 SF luxury residential complex located in Arlington, Virginia. It features 2- 3 story townhouses adjacent to 3 levels of underground parking and towers clad with glass curtain walls and brick. There are 16 stories of apartments with suites located on the top floors and retail space on the ground floors.

The first technical report introduces the existing structural conditions of the Odyssey through detailed descriptions of the foundation, floor, column, and lateral systems. Preliminary analysis of design loads and lateral forces are spot checked on a typical column and shear wall for discrepancies in design criteria. The preliminary analysis provides better understanding into loading and code assumptions made in analysis through ASCE7-02 provisions. Structural advantages in post-tensioned slab design were observed in a comparison to a conventional 2-way system and will be addressed in further analysis of the floor system. Analysis calculations and observations can be found in Appendices A - G as well as descriptive figures of preliminary design component and typical floor plan.