

Executive Summary

This focus of this report is to introduce and analyze the existing conditions for the structural system of the Christina Landing Apartment Tower. The building is a 22 story high rise which is part of a residential building project in Wilmington, Delaware. The project site is located on the fringe of center city just south of the Christina River. Included in the housing development are 63 townhouses, a river-walk, and a 2 acre park. The tower is highly visible and able to be view from both interstate 95 and interstate 495, which bypass the heart of Wilmington.

This report covers the design criteria used and all relevant codes. It also includes detailed descriptions of the structural system incorporated to illustrate how the building resists the loads applied to it. Building schematics have been included to allow for a better understanding of the building layout. All required loads are given as well as calculations detailing wind, seismic, and snow loading. Finally various structural elements are checked for size and capacity compatibility to the existing conditions. All calculations done for this report are given in the appendix.