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555 12TH STREET
OAKLAND, CALIFORNIA



Technical Report #1:
Structural Concepts & Existing Conditions Report

Executive Summary

555 12th Street is a 21 story, 487,000 square foot complex that features Class-A office space, retail space, and dining in one covenant location. Located in the heart of downtown Oakland, California, the building provides great views of the San Francisco Bay, as well as the East Bay Hills. It is one of several buildings that make up what is known as the Oakland City Center. Its use of vision and spandrel glass on the façade, mixed with precast concrete panels, compliments the surrounding landscape and architecture perfectly.

The purpose of this report is to describe the existing structural system of the building and its components. Calculations of all relevant loadings conditions, including gravity, wind, and seismic will be found. With these calculations, spot checks of various structural elements will be carried out and compared to the original design.

The original design used the Uniform Building Code to get its design loads. As I am not familiar with using that code, I used the IBC 2003 and ASCE7 to determine my loading. The gravity calculations were close to the actual designed members, but slightly higher in some. This difference can be explained by the use of a different building code, or using greater loading. The lateral system will need to be addressed further, to verify that the correct spectral response numbers were used, and to gain a better understanding of how loads are distributed to the system. Loads on the moment frame we're too small compared to what they were designed for.