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Structural Option
Eight Tower Bridge
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Structural Technical Report #1
Structural Concepts/Existing Conditions Report

Executive Summary

The following report is an in-depth summary and preliminary analysis of the structural system for Eight Tower Bridge, a 16-story steel high-rise office building located in Conshohocken, Pennsylvania. Completed in April of 2002, Eight Tower Bridge sits on the shore of the Schuylkill River, next to the Fayette Street Bridge, leading to both interstates I-476 and I-76. This prime location for a multi-tenant office building is less than 15 minutes outside of Centre City Philadelphia. The building was designed by the high profile architecture firm of Skidmore, Owings and Merrill, who have been responsible for such structures as the Sears Tower in Chicago, and are currently designing the new Freedom Tower in New York City. Eight Tower Bridge is the most recent office building to be constructed in the Conshohocken area by the real estate development company Oliver Tyrone Pulver Corporation. The company has built nearly $400 million worth of new office, commercial and retail space in the area over the past 10 years, adding nearly 1.2 million square feet of rentable space. The 315,000 square foot Eight Tower Bridge was the largest single function structure of the Tower Bridge buildings to be constructed, falling second in overall size to the mixed-use One Tower Bridge.

The scope of this report is limited to construction documents issued for construction on March 25th, 2001 and in some cases, revision bulletins one through seven. This report is intended to provide an overview of the existing structural system of the building, including information relative to design concepts and required loadings, as well as design assumptions. This report includes a summary of the building's structural components including the general floor framing, structural slabs, lateral load resisting system, foundation system, and bracing system. Spot checks have been completed for a typical floor beam, column and lateral braced frame. Additionally, both wind and seismic load analysis have been conducted on the structure to further analyze the effectiveness of the lateral reinforcing system. Copies of these calculations can be found in Appendices A and C, while sections, plan drawings and framing details can be found in Appendix B and within the body of this report. All loads for analysis have been developed through use of ASCE7-02, BOCA National Building Code and through use of construction documents.