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FORDHAM PLACE
BRONX, NY
STRUCTURAL OPTION
ADVISOR - DR. HANAGAN



Problem Statement

After completing Technical Reports 1, 2, and 3, it was clear to me that the current design of Fordham Place is a complete efficient design. Technical report 1 was an exploration of the existing structural system and calculation of loads. For technical report 2, the existing floor system of concrete on composite metal deck supported by steel beams was compared to six other viable floor systems. It was obvious the existing system was the best and most efficient option, however two other options would be reasonable; two-way flat slab with drop panels and concrete on non-composite metal deck supported by steel beams. In technical report 3, a detailed analysis of the existing lateral system was done. It was determined the existing system, concentric steel chevron bracing, was also a great design for 2 reasons. One, chevron frames is a frame that is inexpensive compared to other lateral resisting systems such as moment frames. Two, the location of the frames throughout the building are located so that when lateral forces are applied to the building, very little torsional moment will be induced into the building. With this said, there was not an obvious system to change in Fordham Place. Therefore, I will redesign Fordham Place using a two way slab with drop panels to gain experience with a concrete floor system.