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Structural Option
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S&T Bank
Corporate Headquarters
Indiana, PA

Executive Summary

The S&T Bank located at 800 Philadelphia Ave, Indiana PA is the corporate headquarters of the bank. S&T Bank is a 4-story steel frame building. The foundation consists of spread footings to support the weight of the building. The framing of the building forms directly into the columns. The floor system is a form deck supported by joists that are 2'-0" on center. To resist lateral loads (from seismic or wind) many of the connections are moment connections. These moment connections however are fastened by "wind clips", which only resist partial lateral loads.

During the analysis of the structure, as can be seen in the appendices, the girder and column that was calculated came to be the same as the girder and column that is used in the structure, W24x68 and W12x53 respectively. The decking also came out as was expected, or at least close to the same. The existing deck is 28 Gage Bowman SF-1 and the calculated decking is 28 Gage UFS deck. Both of these decks are the same depth and thickness. However there were some slight discrepancies when designing the joists. Where the joist design originally called for a 22k2 joist @ 2'-0" on center, the calculated joist for a load of 210psf and a span of 28' turns out to be a 22k4 joist (as provided in Vulcraft Joist Design Manual).