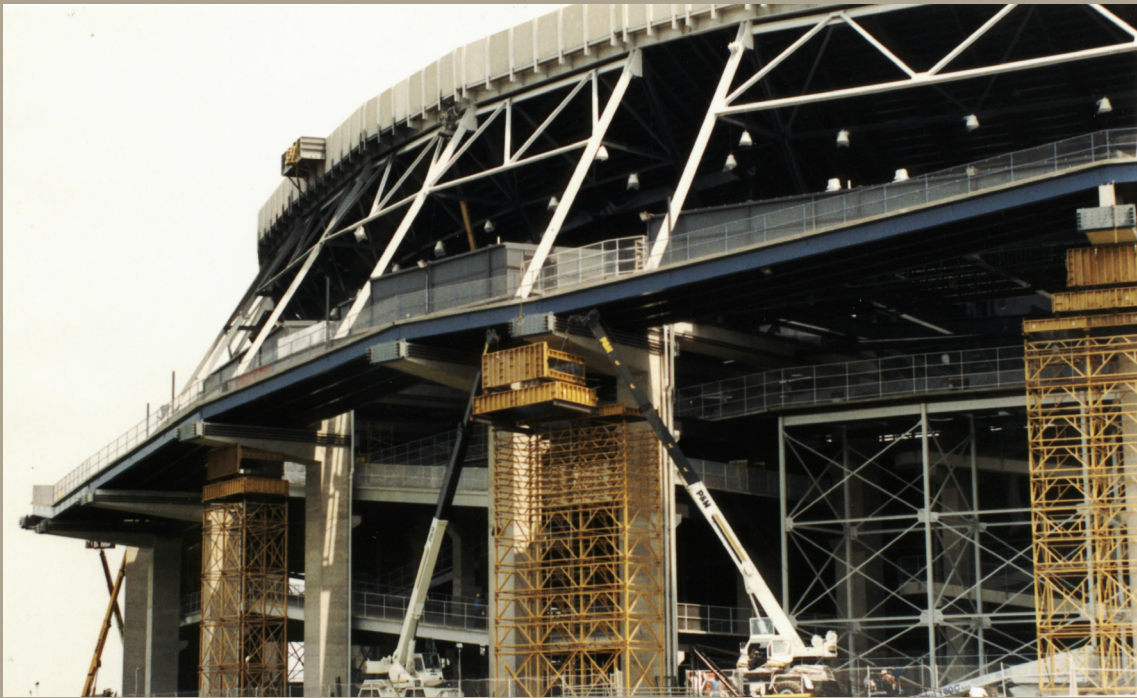


BEAVER STADIUM STRUCTURAL INVESTIGATION, THE PENNSYLVANIA STATE UNIVERSITY



The Office of **Haas Building Solutions Inc.** worked with the University, the stadium designers and the contractor to find the cause and solution to the cracks in the concrete cantilevers supporting the ramps to the new twelve million dollar, 10,000 seat addition to the north end of Beaver Stadium. The cracks appeared just weeks before the completion of the addition and the first game of the 1991 football season.

Since the ramps were already constructed on the supports, removal of the decking of the ramps would have caused an unacceptable delay. Temporary shoring of the cantilevers was ordered for safety. A solution of post-tensioned steel bars on the exterior of the beam restored the structural capacity without removal of the deck and did not delay the completion of the addition. A specialized testing laboratory from Chicago was hired to evaluate the existing structure and to test the modified cantilevers so the University could be confident that the structure was safe.

Owner:
The Pennsylvania State University
Completion Date:
1991
Construction Cost:
\$1,400,000

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