



1700 East 56th Street is a 40-story concrete frame building built in the 1960s. There are several roof levels on the building. The main roof level over the top-floor units consists of 3 separate sections. The middle section was originally designed as a sundeck with a concrete topping slab. The east and west sections of the roof have a conventional roofing system. In addition to the main level roofs, there are approximately 4 additional penthouse roofs, all located above the main roof level.

The existing roofs of the building exhibited persistent water leakage through the PVC membrane. In addition, the building desired to extend the existing sundeck to the east to provide for a larger area and better views of Lake Michigan.

Extension of the sundeck posed several challenges including egress requirements by the building code, structural capacity of the existing roof deck, and fire resistance of a new wood decking material. BTC designed a new sundeck extension on a galvanized structural steel superstructure supported on the building's columns and parapet walls. This superstructure provided adequate structural capacity to support the new increased design loads of a sundeck. BTC also designed the modifications to the existing egress paths. To address the building code requirements for non-combustible decking materials, BTC specified a pultruded fiberglass decking material. All other roofs were replaced with a modified bitumen roofing system. However, the existing sundeck area was waterproofed with a PVC waterproofing system and pedestal paver system.

During construction, BTC provided contract administration services.

**Project Name:**  
1700 East 56th Street Condominium Association

**Project Location:**  
Chicago, Illinois

**Client:**  
Ms. Nicole Washington  
Draper & Kramer, Inc.  
1700 East 56th Street  
Chicago, Illinois 60637

**Approximate Construction Cost:**  
\$600,000

**Year Completed:**  
2003

**Nature of Services:**  
*Designed New Roofing and Waterproofing Systems for the 8 Roof Sections on the Tower. The Design included Design of Patio Extension supported on a New Structural Framing System. Also Provided Contract Administration Services*

