



case study

collaboration at the House at Cornell Tech

The project team for a 26-story Passive House residence at Cornell Tech was able to surmount roadblocks to high performance through collaboration and innovative solutions.

building type

Large Residential, Institutional

built 2017

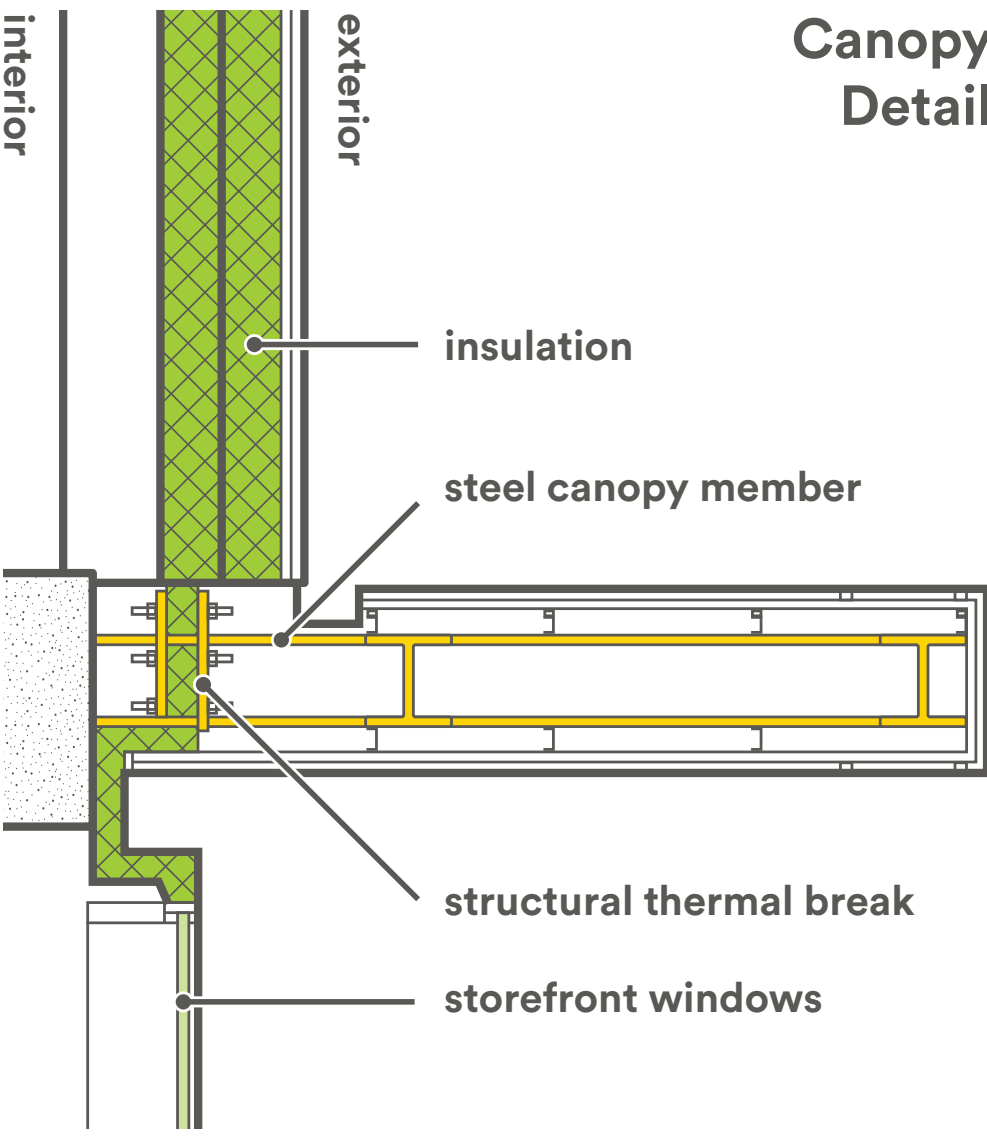
project team
Cornell University
Hudson Companies
Related Companies
Handel Architects
Steven Winter Associates
Buro Happold
Vidaris
Monadnock Construction

30%
Designed to perform 30% more efficiently than code*
*ASHRAE 90.1 2007 standard

outstanding thermal performance

Superior thermal performance was achieved by mitigating thermal bridge conditions throughout the building with a mix of off-the-shelf products and specially engineered solutions, resulting in comfortable and energy efficient living spaces.

One example includes an off-the-shelf, steel-to-steel thermal separator installed where the steel members for a large, cantilevered canopy connect to the building's structural frame. The separator reduces heat transfer without compromising structural strength.



project team collaboration

Working in collaboration with the owner, contractor, and primary manufacturers, the design team oversaw the implementation of a series of innovative solutions that emerged from evolving conditions on the construction site. One challenge for the project team involved correctly air sealing the joints where the prefabricated wall panels connect to the building structure. After a few trial and error tests, a solution was found that was different than the anticipated method.



before air sealing

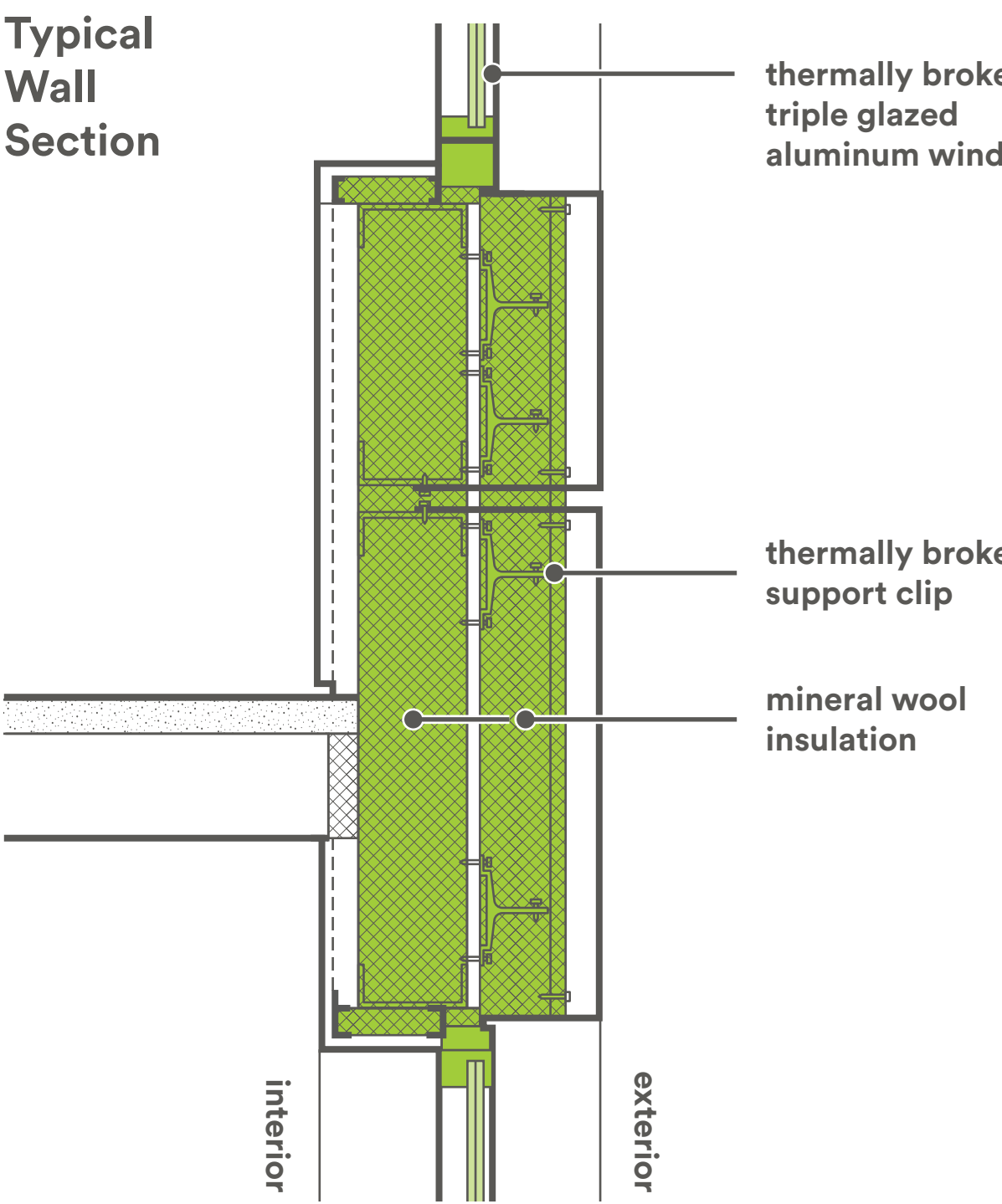
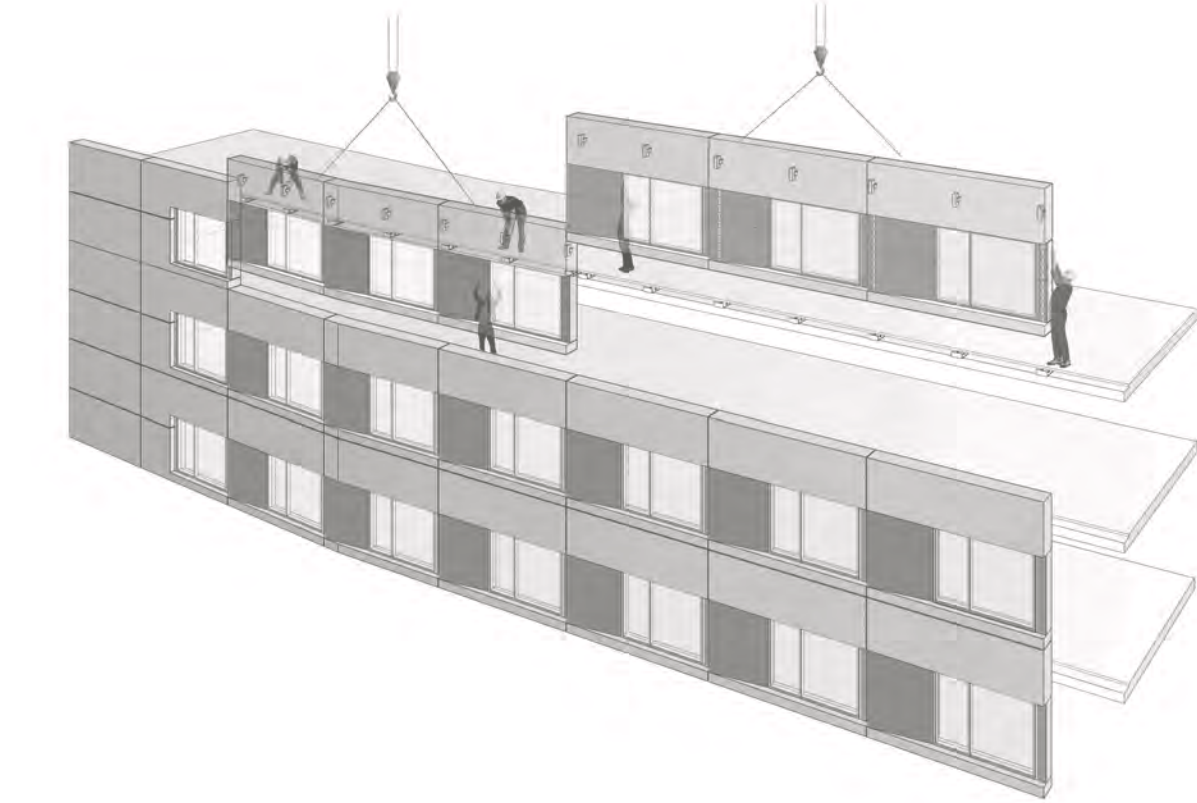


after air sealing

enhanced airtightness



The factory-built panels, each 30 to 36 feet wide, offered faster on-site construction and better quality control, especially for air sealing around the thermally broken, triple glazed windows. With a secondary interior vapor barrier ensuring airtightness, the building envelope achieved a level of airtightness well beyond the Passive House standard's requirements.



The factory-controlled assembly process of the building's window units and metal panel facade provided outstanding quality control of building envelope continuity and air tightness.