



## PROJECT PROFILE

# 2 Allegheny Center

Insulated Metal Panel Condition Assessment | Pittsburgh, PA



### CLIENT

Faros Properties

### BACKGROUND

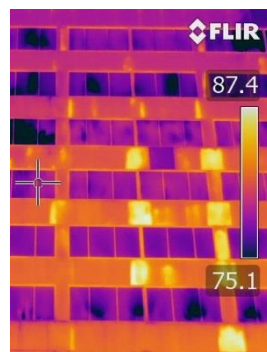
Two Allegheny Center is a thirteen-story high-rise in Pittsburgh's North Shore district. The steel-framed structure was built in the 1970s and is primarily clad with glazed aluminum-framed fenestration and aluminum-faced, insulated spandrel panels. The roofing consists of ballasted single-ply EPDM membrane.

The outboard aluminum facer of a spandrel panel on the west elevation delaminated from the insulation core and fell from the 11th floor of the building. Prior to this most recent failure, five other spandrel panels had fallen from the 11th floor on the west elevation. As such, the owner, Faros Properties, requested WJE determine the cause(s) of the spandrel panel failures and to assess the condition of other metal spandrel panels, so that necessary repairs can be incorporated to mitigate the risk of falling debris hazards due to this condition.



### SOLUTION

WJE's investigation included a document review of original architectural and structural drawings as well as vintage product literature as they pertain to the metal spandrel panels, an infrared thermography survey, and a visual condition survey that included a close range visual survey of the metal spandrel panels. In order to perform the close range assessment, WJE's Difficult Access Team was called upon to use rappelling, climbing, and rope techniques to perform the investigation. At each rope drop location, WJE assessed the condition of the sealant, exposed insulation, spandrel panels and anchorage, and performed limited testing to determine if thermal anomalies relate to delaminated aluminum facers.



WJE found three panels that were in danger of falling and were immediately repaired. It was determined that the delamination of the facer is likely caused by the deterioration of the adhesive due to moisture. Full panel failure is caused by the disengagement of the snap-on aluminum clip that engages the window frame above and below the spandrels.

To limit the introduction of water into the panels, new panel-to-panel sealant was recommended. Additionally, where the snap-on trim is loose or missing, a new anchorage detail was recommended to prevent future failure.