



The Falcon Group

ENGINEERS, ARCHITECTS AND ENERGY CONSULTANTS



James Monroe

Drone Façade Evaluation

PROJECT LOCATION
Jersey City, NJ

BUILDING TYPE
34 Story Residential

PROJECT VALUE
\$13,000

The James Monroe Condominium Association consists of one 34-story high rise residential building and a mechanical bulkhead, built in 1988, located in Jersey City, New Jersey. The building exterior is comprised of 12" thick reinforced structural concrete load bearing walls and aluminum window systems with composite spandrel panels. Projecting reinforced concrete balconies are located in line at all four elevations with metal guardrails. In order to maintain and repair the façade structure, the Association hired The Falcon Group to document current conditions with the use of a piloted drone to film the façade for evaluation. A Falcon drone pilot used an intended flight path to capture and document existing conditions of the building façades. In addition to using the drone footage for evaluation, Falcon provided the Association the video footage and photographs of the deficiencies for their records. In particular, each balcony was documented and located to capture existing conditions and monitor deficiencies.

The façade systems that Falcon evaluated included the following;

- Window & Door Systems, Spandrel Panels & (PTAC) Unit Deficiencies
- Balcony Deficiencies
- Reinforced Structural Concrete Bearing Walls and Floor Edge Deficiencies

Drone footage gave the engineers an excellent tool to observe areas of the façade that would not have been easily accessed by scaffold. In one day, the entire façade was documented for evaluation as opposed to several days of manned observations. With the time and labor savings, Falcon was able to extend the savings to the client.

A project engineer will always accompany the drone pilot to review the footage and rephotograph immediately if any areas have been missed. In addition, to increase clarity of the deficiencies and map their location, Falcon reevaluated the video documentation and instead will use the drone for photographic documentation. High-definition photographs provide better images of the deficiencies than video. Each building elevation will be mapped and segmented in order to locate each deficiency for repair.



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