BTC

Project Profile

The Residences at the Grove Condominium Association is a 53-unit residential community. The units are grouped in 7 buildings. The buildings are typically 3 stories and constructed of conventional wood framing. The building exteriors primarily consist of fiber cement siding with masonry accents. The roofs are typically steep roofs with laminated asphalt shingles.

The Association had concerns due to persistent water leakage at several locations. Prior reports concluded that the existing roof drainage system, consisting primarily of gutters and downspouts, were generally inadequate to handle design rain loads.

BTC performed an evaluation of the water leakage consisting of a visual review, exploratory openings and water testing.

Typical gutter dimensions were measured in the field. Using those dimensions and the roof dimensions indicated on the construction drawings, BTC performed an analysis to evaluate the required gutter and downspout sizes to accommodate a 100-year storm. The results indicated that the provided gutters and downspouts were, in fact, oversized and were not believed to be contributing to the reported water leakage.

The evaluation revealed several design and construction deficiencies. Although the design drawings failed to require installation of a rubberized asphalt underlayment (RAU) along the eaves and valleys, RAU was installed at those locations. However, the installation of the RAU included several defects that contributed to the reported water leaks. These defects included the failure to extend the RAU down onto the fascias, up on adjacent walls, and over rake edges. In addition, the RAU had been installed improperly at critical locations, making it ineffective.

Project Name:
Evaluation of Roof Leaks at
The Residences at the Grove

Project Location:
Forest Park, Illinois

Client:
The Residences at the Grove
Condominium Association / M&M
Property Management
649 Madison Street
Oak Park, Illinois 60302

Approximate Construction Cost:
Not Available

Year Completed:
2012

Nature of Services:
Field Investigation Consisting of
Evaluation of Existing Roofs and Analysis
of the Existing Roof Drainage System

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