BTC

Project Profile

Prospect Heights Public Library is primarily a single-story building. The original portion of the building was constructed in 1971. An addition was constructed in 1992 which surrounded the original building on its east, south and west sides.

The original building and the addition are constructed of steel frame and are primarily clad with brick masonry. The original building had a steep-slope standing seam architectural copper roofing system installed on a cementitious wood fiber deck. That roof was coated with an elastomeric coating during construction of the addition.

BTC's assistance was requested due to several chronic water leakage issues that occurred along the interface of the original standing seam copper roofing and the addition's EPDM roof, due to several of the HVAC equipment reportedly failing on a regular basis, and due to difficulties moderating interior temperatures. BTC worked with a mechanical consultant to evaluate the HVAC issues.

An infrared survey was performed over 16,000 square feet of low-slope EPDM roofing system. Numerous thermal anomalies were observed throughout the roofs indicating areas of saturated roof insulation. The areas of saturation were primarily attributed to open membrane laps and failed perimeter flashings. Water testing also revealed deficiencies in the construction of the interface between the steep-slope and low-slope roofs.

Due to the extent of moisture observed below the roof membrane, the extent of deterioration, the age of the roofing system, and the lack of a vapor retarder, BTC recommended the replacement of the roofs. BTC also recommended changes to the HVAC system and building envelope insulation to address temperature control deficiencies.

Project Name:
Prospect Heights Public Library

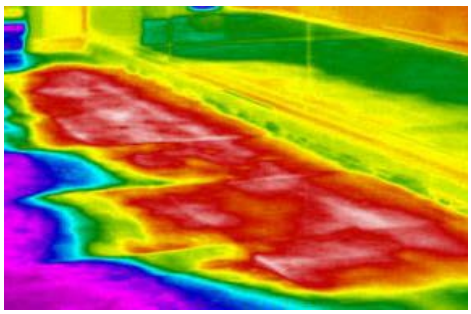
Project Location:
Prospect Heights, Illinois

Client:
Prospect Heights Public Library District
12 North Elm Street
Prospect Heights, Illinois 60070

Approximate Construction Cost:
Not Available

Year Completed:
2013

Nature of Services:
Condition Assessment and Evaluation of Building Envelope and HVAC System, Infrared Survey, Water Testing, and Exploratory Openings



Building Technology Consultants, Inc.

1845 East Rand Road, Suite L-100
Arlington Heights, Illinois 60004
Main: (847) 454-8800 | www.btc.expert