BTC

Project Profile

The University Library is a concrete frame structure that serves as Northwestern University's main library. The library consists of 17 low-slope roof sections totaling approximately 60,000 square feet in plan with the largest roof sections being part of the 3 distinctive main towers.

The unique design of the main tower roof perimeters consisted of numerous corners with no coping caps integrated into the roof perimeter termination for aesthetic reasons. The existing roofs were not constructed with sufficient drainage slope. Furthermore, sufficient height to integrate a fully tapered insulation system was not provided at roof perimeters and various vertical projections.

BTC specified a fully adhered 90-mil thick EPDM system with a reflective coating. Tapered insulation was used at select areas to minimize potential for ponding water. All roof membrane seams were covered with splice cover sheets for a redundant seam construction. The perimeters of the main tower roofs were specially detailed to maintain the original aesthetics of the facade panels without any visible metal coping caps. However, a custom-designed termination bar was used to terminate the roof perimeter flashing. The parapets at the other penthouse roofs were retrofitted with a new custom-designed low-profile stainless steel coping cap.

A white acrylic reflective coating was applied to the new EPDM roof system to provide the benefits of a reflective roof.

BTC also provided bidding assistance and contract administration services during the construction phase of the project.

Project Name:
University Library Roof Replacement, Northwestern University

Project Location:
Evanston, Illinois

Client:
Northwestern University
2020 Ridge Avenue
Evanston, Illinois 60208

Approximate Construction Cost:
$1,300,000

Year Completed:
2009

Nature of Services:
Evaluation of Existing Roofing Systems, Design of New Roofs, Bidding Assistance, Construction Contract Administration

Building Technology Consultants, Inc.

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