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A/E Design and Construction Management Services for Roof Replacements at Congressional State of the Arts Office Condominium

Kendall Park, New Jersey

PROJECT TYPE
Design, Construction Inspection

PROJECT OWNER/CLIENT
RCP Management Company

CONTRACT AMOUNT
$19,500 fee

START & END DATES
06/2008 – 01/2009

ROLE
Prime
Structural Engineering
MEP Engineering
Architecture
Construction Inspection

REFERENCES
Richard Fry, RCP Management Company
(609) 683-7980

PROJECT DESCRIPTION

We provided A/E design and construction management services for the replacement of an existing 20-year old, stone ballasted EPDM roof on the Congressional State of the Arts Condominium office complex in Kendall Park, New Jersey to increase energy efficiency and align the roof to current NJ Energy Code standards. The scope consisted of a $210,000 rehabilitation of three one-story, rectangular buildings, each with a flat roof and ballasted, built-up roofing membrane that required replacement. In addition to survey and design, SJH prepared specifications, cost estimates, and directed contractor selection.

The existing single-ply roofing system membrane on 1 ½" to 2" rigid insulation metal roof decking was in disrepair, with patches, and gravel missing around both the perimeter and equipment. A metal roof hatch on a prefabricated curb on wood blocking provided access to the roof. On one roof, a make-shift satellite antenna was held down by concrete blocks. The perimeter of each roof was finished with a metal gravel stop and fascia. Approval from the Township of South Brunswick was required to obtain construction permits.

SJH's cost effective design solution simultaneously increased the building's energy efficiency, brought the roof up to current NJ Energy Code standards, and protected the construction schedule from weather-related delays.

Our team conducted surveys of the existing roofs, prepared roof plans, demolition plans, proposed improved roof details with increased insulating efficiencies, and managed the construction phase of this project. New drainage was designed based on existing roof slopes. Details for openings and flashing for HVAC supports and drain pipes were developed to provide the maximum useful life of the new roofs. Tapered insulation sumps were installed at each drain. New traffic pads from the low hatch to the mechanical equipment protect the roof from damage by maintenance traffic. The new cost-effective, four ply membrane system with 45,000 square feet of new polyisocyanuarate rigid insulation results in a light-weight, watertight building envelope.