

Thomas Edison High School

Leakage Investigation, Repair Design, and Construction Administration Services
Philadelphia, Pennsylvania



CLIENT

School District of Philadelphia

CHALLENGE

Water leakage had been occurring since construction of this twenty-year-old school was completed. Following the implementation of major repairs designed by others, water leakage continued at more than sixty locations; the owner was considering replacing all of the roof systems.

STRUCTURE

Thomas Edison High School is a three-story structure clad in brick masonry. The roofs consist of approximately 156,000 square feet of sheet metal standing seam roofing and about 13,000 square feet of ballasted EPDM and fully adhered EIP single-ply roofing.

SOLUTION

WJE visually assessed the roof and wall systems, documented the locations and types of leaks, and created inspection openings in walls and roofs to review flashings and other concealed construction. We concluded that the leakage was caused by deficiencies in the flashings at interfaces between the roofs and walls. This meant that the existing standing seam metal roofs could be saved by implementing localized repairs to the metal roofs and masonry wall flashings. The school district proceeded with this repair and opted to replace only the failing twenty-year-old EPDM roofing systems. During construction, we worked closely with the contractor and school district to verify compliance of the work with the project documents.