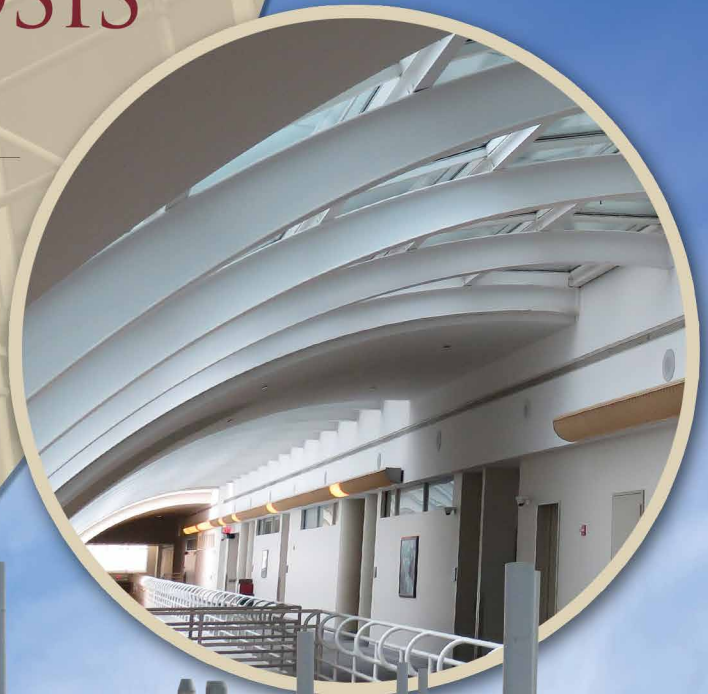


LEAK DIAGNOSIS & REPAIR

Complex Sealant Replacement
at Tech Campus



TEK Park Technology Campus
Breinigsville, Pennsylvania



Extensive Testing and Planning Allows Successful Sealant Replacement

TEK Park Technology Campus

Leak Diagnosis & Repair

PROJECT BACKGROUND

- ◆ In 1987, AT&T constructed a world-class research and development center for its Bell Laboratories subsidiary; the property sits on 137 acres just outside Allentown, Pennsylvania
- ◆ In 2002, Agere Systems, Inc. had over 2,000 people employed at the site, involved in everything from research and development to manufacturing and assembly
- ◆ Today, TEK Park is one of the most advanced technology campuses in the Mid-Atlantic and includes over 500,000 square feet of office and conference room space; cleanroom, lab, and clean production space; and mission-critical operations and data center space
- ◆ As the building envelope reached 25 years in operation, the flexible sealants that stitched together the exterior metal and glass and masonry building envelope reached the end of their service life
- ◆ As the sealants began to fail, the building was plagued with leaks and water infiltration breaching the envelope

PROJECT CHALLENGES

- ◆ Prioritizing and diagnosing water leaks and corresponding repairs on this campus presented unique challenges due to the variety of materials and details included in construction
- ◆ The site layout of various building sections limited access to walls and required specialized custom access at most areas
- ◆ Substrate expansion and contraction of the large metal panels due to temperature fluctuations caused joint geometry problems before the sealant could initially cure and required adaptation during installation
- ◆ Leaks were often compounded and fed by more than one source and deficiency, requiring a stepped and measured repair response to accomplish economical solutions

PROJECT APPROACH

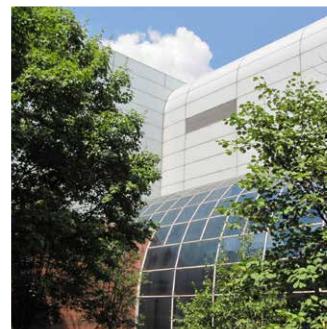
- ◆ Extensive water spray testing was utilized to pinpoint facade breaches and corresponding infiltration zones to enable a targeted repair approach; pre- and post-repair water testing was completed to validate the repair program and provide the owner with performance confidence
- ◆ MPS implemented a detailed campus-wide repair data collection and tracking system to log completed, ongoing, and scheduled repairs—this supported fiscal planning and enhanced institutional knowledge
- ◆ Careful substrate preparation and testing was required to ensure success of sealant bond, application, joint geometry, and performance
- ◆ Creative use of high-quality silicone sealants and pre-molded silicone seals allowed successful joint replacement at challenging joints

"MPS was the perfect partner for investigating, communicating, and executing permanent solutions to water infiltration. A very professional outfit that was a pleasure to work with. Highly recommended."

Hank Merrill

Vice President of Engineering & Operations
MRA Group

Crafting a higher standard for preservation, Masonry Preservation Services is recognized throughout America for our unique approach to masonry preservation and building envelope diagnostics. MPS has been specializing in architectural maintenance and restoration since 1985.



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