SWR INSTITUTE

RESTORATION AND INVESTIGATIVE SERVICES

JAMES GARRETT SPORTS COMPLEX AT SUSQUEHANNA UNIVERSITY

Witmer Restoration, Inc.

Repair of blatant disregard for masonry practices

OVERALL SUMMARY OF THE BUILDING

- Susquehanna University is a private institution founded in 1858 and educates 2,200 students yearly in the Georgian style buildings on the campus.
- James Garrett Sports Complex is the focal point of the 210 acre campus that encompasses a 65,790 square foot area.
- Construction on the Fieldhouse started in early 1999 and was completed late in the year of 2000.
- Initial cost of the project was 12.9 million featuring 51,000 square feet of open recreational area.
- The building structure was structural steel, with concrete masonry infill's along with steel studs. The veneer façade was a red matt modular brick highlighted with precast concrete features.

PROBLEMS & CHALLENGES

- The University started experiencing water infiltration issues approximately five years after the building was completed.
- After years of replacing drywall soffits and cleaning up water we were asked to review the building issues and generate a proposal for needed repairs. The original description of work related to openings in the exterior façade to review backup conditions along with removal of the existing coping stone. Our proposal recommended a structural engineer to visit the site if conditions were a life safety factor. The following are problems and challenges our team faced throughout the project;
- Completely missing or incorrectly installed backup structures.
- Blatant disregard for masonry practices on just about every item associated with all exterior walls including exterior sheeting, vapor barrier, flashings, veneer ties, and connections for the exterior backup walls to the structure.
- Usage of inappropriate and non-conforming materials.
- Temporary shoring was required on every wall section due to the horrific existing conditions.
- Keeping our technicians and the student's at the University safe was our main focus of every aspect of our work. All safety barriers and enclosures were installed to keep everyone safe and away from our work areas.

SCOPE OF WORK

- Installed all required barriers, signage, and protection.
- Completely removed all precast coping stone and replaced with wood blocking and aluminum coping.
- Removed all backup walls including concrete block and steel stud walls and replaced with new, including exterior sheeting systems.
- Removed and replaced 40,000 modular brick veneer units.
- Installed all connections required by the engineer to fasten the new backup walls to the structural steel.
- Installed all new flashings and brick veneer connections to the backup structures.

SITE CHALLENGES/UNFORESEEN ISSUES

- Performing this type of invasive work on an active campus especially around college sports schedules.
- Access to the work areas were very limited on one elevation, travel to this area was through a track field over 250 yards long along with the use of a 200 ton crane to remove coping stone.
- This project was very time consuming due to the daily interaction with the Structural Engineer and the Facility Manager due to unforeseen conditions.

PROJECT STATUS

- This project sat dormant for one year while litigations were ongoing. Once the project started we worked through the hardest winter the Northeast encountered in the last few decades.
- We started the actual repairs on the project in September of 2013 and finished the largest phase the week prior to the University's graduation on May 9th, 2014. The final phase started June 3rd and was completed July 2nd of 2014.
- The project was completed on time with one week to spare ahead of graduation along with meeting the budgeted cost that were allocated towards the repair procedures.

CLOSEOUT COMMENTS

- The original Architect, Structural Engineer, and the General Contractor were contractually obligated to monitor and inspect all work-in-progress for compliance within the contract documents and they failed miserably
- Failed to recognize blatant issues with constructability.
- Failed to inspect materials and deliveries to the site for specified usage.
- Failed to ensure that all construction activities were performed in conformance with specifications, contract documents, and corresponding industrial standards.
- Failed in taking proper steps to have the contractors correct the non-conforming work.
- The failures noted above resulted in widespread water infiltration and life safety conditions for the University.