



## PROJECT DETAILS

Hills School gymnasium  
and parking garage addition –  
Harvard University

## LOCATION

Cambridge, MA

## PRODUCTS USED

COREFLEX™

ULTRASEAL™

SWELLTITE™

VOLTEX™ DS

WATERSTOP-RX™

HYDROSHIELD™

Quality Assurance Program

## CHALLENGE:

High Hydrostatic conditions, hundreds of slab penetrations, poor site and weather conditions.

## SOLUTION:

The Shady Hills School addition, a gym with a garage beneath it, was integrated into an existing structure 11 feet below the water table. The original specification called for ULTRASEAL below slab with a layer of VOLTEX DS installed over it to provide protection from subsequent concrete operations. Additionally, SWELLTITE was chosen for the portion of the gym roof that would fall outside of the gymnasium interior in a terrace type area.

Originally, there was little concern for the hydrostatic head. However, once the foundation was dug and dewatering of the site began, it became apparent that there would be significantly more water at a greater flow rate. In order to overcome the extreme hydrostatic conditions, COREFLEX-60 was specified. COREFLEX features welded thermoplastic membrane seams and an active polymer core liner. This design provides a continuous system with both passive and active waterproofing to ensure a dry structure.

The COREFLEX membrane tied seamlessly into both the ULTRASEAL, which wrapped up the footers, and the SWELLTITE, at a grade near the top of the walls, to create the continuous system. As an additional benefit, the COREFLEX-60 was pre-seamed into large panels in order to speed installation. The panels were then transferred to the walls and installed in 25' x 12' sections, allowing the contractor to not only keep up with the rigorous construction schedule, but to actually overtake the concrete contractor.

CETCO's breadth of products allowed for a customized, total solution for extreme conditions. Furthermore, the waterproofing was covered by the industry leading HydroShield Quality Assurance Program - a comprehensive program that protects structures from water ingress with design guidance, quality waterproofing products, proper installation and independent inspection.dry structure.

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