

# CETCO WATERPROOFING SOLUTIONS OVERCOME HIGH WATER TABLE AND GROUND CONTAMINATION

Located in Washington, DC, the construction of Constitution Square faced some unexpected challenges: a high water table with extremely wet conditions and diesel fuel contamination. CETCO worked closely with the design team to identify a complete solution.



## PROJECT DETAILS

Constitution Square Commercial and Residential Towers

Project Owner:  
CS Master V, LLC

General Contractor:  
Clark Construction

## LOCATION

Washington, DC

## PRODUCTS USED

COREFLEX®  
ULTRASEAL®  
VOLTEX®  
ENVIROSHEET  
STRATASEAL HR  
WATERSTOP-RX®  
CORETEX

## CHALLENGE:

Property line construction with extreme hydrostatic conditions and contaminated groundwater.

## SOLUTION:

Constitution Square is a high profile commercial and residential group of 3 towers located in the heart of downtown Washington, DC. Crews faced a rigorous construction schedule with little time to resolve unforeseen issues. Covering an entire city block, the site was very wet and because of the proximity to an old railroad site, it was contaminated with diesel fuel and other volatile organic compounds. In addition to overcoming the high water table and wet conditions, there were concerns about the contaminants affecting the integrity of the membrane and then permeating the structure.



**CETCO**®

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In order to overcome these difficult conditions, CETCO worked closely with the design team to ensure a clear understanding of the concerns and determine a total solution. A system was developed that combined CoreFlex at 23' below grade and lower depths to combat the high hydrostatic conditions and contamination and Ultraseal above the 23 elevation to ensure a dry structure. Special details were developed to treat difficult transitions in elevations, from building to building and product to product, especially near grade.

The combination of CoreFlex membrane, which features welded thermoplastic seams and an active polymer core liner and Ultraseal, an advanced blended-polymer alloy, not only ensured a dry structure but proved to be extremely tolerant of construction traffic and effective against soil contaminants. Additionally, in order to meet the demanding construction schedule, an onsite plan was developed to install materials with the large amounts of water present.

The CETCO solution proved to be easier to build in the conditions and more cost effective than the competition. CETCO's breadth of products allowed for a customized, total solution for extreme conditions. Furthermore, the waterproofing system was covered by the industry-leading HydroShield™ Quality Assurance Program – a comprehensive program that provides security to owners and architects through design guidance, quality waterproofing products, proper installation and independent inspection-all backed by a no dollar limit warranty.

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