



IMPERMITEK

Advanced Seamless Technologies

OVERFLOW TANK

Case Study

Project Type:

Water Tank Restoration

System Installed:

IR-26 Polymer Resin

Project Size:

575 Square Feet

Sector:

Commercial

Location:

Boston, Massachusetts

Authorized Installer:

Tek Roofing



PROJECT INTRODUCTION



A commercial parking garage near the Boston, Massachusetts coastline relied on an overflow water storage tank as a critical part of its water-management strategy. The tank is designed to collect excess water before it can migrate into the parking structure, helping protect the garage, vehicles, equipment, and surrounding building components from flooding and water-related damage.

Over time, the tank's existing waterproofing system had reached the end of its useful service life. Previous repair and coating attempts had not delivered the dependable, long-term protection the owner required, and recurring water exposure continued to create concern. Because the tank periodically fills during service, the restoration also had to be completed within limited dry windows and returned to operation quickly.

Impermitek Authorized Contractor Tek Roofing was selected to complete the 575-square-foot restoration using the IR-26 Polymer Resin System. The project called for a waterproofing solution that could bond directly to the prepared CMU substrate, accommodate numerous corners and changes in plane, cure rapidly, and create a continuous barrier capable of performing in a demanding commercial environment.

PROJECT CHALLENGES

This was not a conventional waterproofing application. The overflow tank plays an active role in protecting the parking garage, which meant prolonged shutdown was not practical. Work had to be carefully sequenced around periods when the tank was empty, giving the installation team a narrow and unpredictable window to prepare the substrate, complete detailing, install the membrane, and allow the system to cure before the next overflow event.

The existing cement masonry unit (CMU) walls also presented a challenging surface. Masonry is naturally porous and contains mortar joints, surface irregularities, corners, transitions, and changes in plane that must all be incorporated into one continuous waterproofing assembly. Any weak point in these locations could compromise the per-

formance of the tank and reintroduce the risk of water entering the parking garage.

Compounding the challenge, multiple waterproofing systems had previously been attempted. The owner therefore needed more than another short-term coating. The goal was a fully bonded, reinforced solution that could simplify complex detailing, minimize the number of potential failure points, and provide a durable waterproof barrier throughout the tank.

Speed was equally important. A conventional system with extended cure times could have left the tank unavailable for too long. The project required a cold-applied, fast-curing technology that could make efficient use of the available dry window while reducing disruption to normal building operations.

THE IMPERMITEK SOLUTION

Tek Roofing began by thoroughly preparing the CMU walls to create a sound surface for the liquid-applied waterproofing system. The masonry was cleaned and washed to remove loose material and surface contamination, then allowed to reach the appropriate condition for priming and membrane installation. Careful substrate preparation was essential to support strong adhesion and the long-term performance of the finished system.

Impermitek General Primer was then applied to promote adhesion and establish a consistent base for the IR-26 Polymer Resin System. With the substrate prepared and primed, the contractor moved to the most critical waterproofing details first. Perimeters, inside corners, transitions, and changes in plane were reinforced and waterproofed before the field areas were completed. This detail-first approach helped establish membrane continuity at the locations most vulnerable to water entry.

The fully reinforced IR-26 System was then installed across the tank walls to create a continuous waterproofing layer. IR-26 is a cold-applied liquid membrane that forms in place, allowing it to conform closely to irregular masonry surfaces and complex geometry without relying on the numerous laps, seams, and welds associated with many traditional sheet systems. The reinforcement fabric added strength and helped the membrane bridge and protect critical transitions throughout the tank.





IR-26's fast-curing resin technology was a major advantage on this project. It allowed Tek Roofing to make efficient use of the available dry period, complete the installation with minimal downtime, and return the overflow tank to service quickly. Because the system is cold-applied, the work could also be completed without flame-based hot works, an important benefit within an active commercial parking structure.



The completed installation delivered a fully bonded, seamless and reinforced waterproofing assembly designed to provide durable protection against repeated water exposure while accommodating normal substrate movement. Most importantly, the project addressed the owner's recurring waterproofing concerns and restored confidence in the overflow tank's ability to perform its intended function: managing excess water before it can threaten the parking garage below.

By combining detailed substrate preparation, carefully reinforced transitions, seamless liquid-applied technology, and rapid curing, Impermitek and Tek Roofing transformed a difficult, time-sensitive restoration into a practical long-term waterproofing solution. The project demonstrates how the IR-26 Polymer Resin System can help solve complex containment and below-grade waterproofing challenges where reliability, detailing flexibility, and minimal downtime are critical.