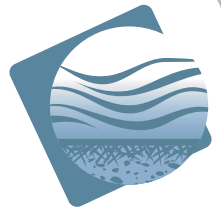




*At the Lab. In the Field.  
By Your Side.*

# YESLER BUILDING BASEMENT REPAIR

WASHINGTON, USA



**CONCRETE  
WATERPROOFING**

Page 1 of 2

QUESTIONS: 1-800-267-8280 or [www.kryton.com](http://www.kryton.com)

## BACKGROUND

Just a few blocks from Seattle's world-famous Pioneer Square, the Yesler Building has been an important part of the city's history since 1907 when it functioned as City Hall. Today, the Yesler Building houses numerous King County municipal offices and courts.

Over the years, moisture and repeated freezing and thawing had caused the building's porous concrete to deteriorate, leaving gaping holes in walls and corroding steel reinforcements. In the building's 2-level basement, damage was so severe that these floors had essentially been abandoned. Moisture and mold had created a musty smell and the building's wiring had begun shorting out due to water leakage in the electrical system.

Recently, the county undertook extensive repairs to stop the leakage, preserve and protect the structure and return the basement levels to a useable condition. At first, the county planned to inject liquid bentonite to fill the holes and block water penetration. They soon realized, however, that the holes and damage were more extensive than originally estimated, and that this course of action would not solve the problem.



PROJECT CASE STUDY

## LOCATION

King County, Washington, USA

## OWNER

King County

## ENGINEER

KPFF

## WATERPROOFING CONSULTANT

Ray Weatherholt & Assoc.

## CONTRACTOR

Cutter Construction, Inc.

## CONTRACTOR

Comar Enterprises Ltd.

**The Kryton Group of Companies.**

1645 East Kent Avenue, Vancouver, BC Canada V5P 2S8 Tel.: 1-604-324-8280 Toll Free: 1-800-267-8280 Fax: 1-604-324-8899 E-mail: [info@kryton.com](mailto:info@kryton.com) Web: [www.kryton.com](http://www.kryton.com)

## SOLUTION

Having been introduced to the Krystol™ Concrete Waterproofing System by Kryton's local distributor, Comar Enterprises Ltd., King County decided to give it a try.

The Krystol™ system is based upon Kryton's proprietary Krystol technology, which turns porous concrete into a permanent waterproof barrier. When added to a concrete mix or applied to existing concrete, Krystol creates a chemical reaction that causes needle-like crystals to grow, filling the spaces between concrete particles and permanently blocking the movement of water in all directions. If small cracks later form, incoming water causes additional crystals to grow, self-sealing the cracks and stopping the movement of water through the concrete.

A test section of the basement was repaired using Krystol™ T1/T2, a cementitious brush-applied product suitable for waterproofing existing concrete, in an application known as Krystol Specification 1. Satisfied with the results in the test area, the county authorized repairs in the entire basement using Krystol Specifications 1 and 2 and various products from the Krystol™ Concrete Waterproofing Line. One inside wall was so badly damaged that, once the holes had been grouted in, a rebar grid was built and Krystol-treated shotcrete was used to form a new wall.

Given the extent of the original damage, it wasn't surprising that, once the first round of repairs was complete, water continued to seep through the concrete in a handful of areas. When cracks and leaks are repaired, water will sometimes find other weaker areas in which to seep through. Once these "weepee" spots in the concrete were identified, they too were repaired using Krystol™ T1/T2.

Ten days after repairs were completed, the Yesler Building's waterproofing was put to a formidable test when an 18" water line broke right next to the building. Although there was over \$100,000 of damage to the street and sidewalk and some water did enter the building through ventilation ducts, no water leakage was detected through the building's walls or in the basement.



Before and After shots.

*Left: Holes in the wall before the repair.*

*Right: After the T1 System Repair.*



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