



Atlantic Industries Limited

# PROJECT PROFILE



November 16, 2019

## Best•Kote Box Culvert best choice for St. John's stream crossing

### Area known for its aggressive soil chemistry

When a Galvanized CSP Pipe Arch had reached the end of its service life in an area known for its aggressive soil chemistry, the City of St. John's opted to replace it with a Super•Cor Box Culvert with Best•Kote Polymer Coating from AIL.

### Best•Kote Polymer Coating: design service life of over 75 years

For harsh environments, optional Best•Kote Polymer Coating offers superior protection and long-term durability for our structural steel plate products. In fact, our steel infrastructure with Best•Kote has a design service life of over 75 years.

This two-layer coating system is factory-applied to the finished plates through an electrostatic-bonding process that ensures 360° protection. The first layer is a zinc-rich base layer for excellent corrosion resistance and barrier protection. The second layer is a polymer finish that provides superior resistance to corrosion, abrasion and inorganic acid, salts or alkali (diluted).

### Project at a glance:

**Name:** Doyle's Brook Culvert Replacement

**Location:** St. John's, Bishops Line

**Owner:** City of St. John's

**Engineer:** CBCL

**Contractor:** Modern Paving

**Sector:** Transportation

**Application:** Stream Crossing

**Product:** Super•Cor Box Culvert with Best•Kote Polymer Coating)

**Arch Dimensions:** Span 6.2 m, Rise 1.32 m, Length 10 m

**Installation Time:** After footings were ready, the Box Culvert was assembled in two days.





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## Low rise, high flow — Box Culvert ticks all the boxes

While the Best•Kote Polymer Coating addressed the aggressive soil concerns, the Box Culvert's geometry ticked the rest of the boxes on this project quite nicely.

Because there was a water main below the structure and the stream was prone to flooding, we designed a custom box geometry that met the flow requirements while having a low enough rise to not interfere with the water main.

As with any structural plate crossing solution, bonus points were recognized for the lower installed cost, faster installation and a continuous running surface with no troublesome bridge joints to maintain.

We worked with the consultant, CBCL, from the preliminary stages of the project, and provided budgetary quotes and timelines. Once the project was awarded to AIL, we organized prompt production and delivery. We provided on-site assistance to ensure the assembly of the structure went smoothly.

Although very prevalent in many areas of Newfoundland and Labrador (see Related Projects), this was the first structural plate solution chosen by the City of St. John's in over 20 years — thanks to the convincing performance benefits of Best•Kote Polymer Coating. Hopefully, there will be more in the near future.

Coatings on steel are proving to be the way of the future in our industry, with different types of coatings and processes for the various products available.

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