



# St. John's International Airport Bin-Wall

<b>OWNER</b>	St. John's International Airport
<b>ENGINEER</b>	Hatch Mott MacDonald
<b>CONTRACTOR</b>	Pyramid Construction Ltd.
<b>LOCATION</b>	St. John's, NL

St. John's International Airport services approximately 1.5 million passengers per year connecting Newfoundland and Labrador to the rest of the world. Forecasts indicate that approximately 20 million passengers will travel through the airport by 2020. To accommodate this increase the airport has implemented a 10 year Improvement and Expansion Plan. Included in the plan was the construction of a bin-type retaining wall system to support a new parking area.



**Application:**

A new vehicular parking area was required as part of the St. John's International Airport Improvement and Expansion plan. In order to support the new parking facility, a bin-type retaining wall system was required.

**The Challenge:**

The retaining wall system required was L-shaped with a 90° bend and needed to provide a level surface for the new parking area. The product chosen needed to provide flexibility in design and accommodate existing grade variations. The original tender for the project called for a generic galvanized retaining wall. The risk of groundwater rising and coming into contact with the structure however posed a corrosion risk for this material specification.

**The Solution:**

Armtec proposed a retaining wall made of Bin-Wall for the new parking area. Bin-Wall's modular components and variety of bin sizes allowed the wall to be custom designed to accommodate the varying slope and the wall's L-shaped configuration. Twenty-seven Design C bins (2.0mm thick and 3.0m deep) and twelve Design B bins (1.6mm thick and 2.4m deep) were used in total.

Bin-Wall can easily accommodate curves and bends in its design. The 90° bend was incorporated using a custom cover plate installed on the front face corner. The cover plate was reinforced with structural members on the soil side of the plate to maintain an attractive flat surface on the visible wall side.

In order to prevent corrosion from rising groundwater, Aluminized Steel Type 2 Bin-Wall stringers (horizontal face sections) and spacers (transverse sections) were used. Aluminized Steel Type 2 combines the corrosion resistant properties of aluminum with the strength of galvanized steel increasing service life up to 75 years.

The retaining wall was successfully completed in July 2011 creating a level surface for the construction of the new parking facility.



**TECHNICAL DETAILS**

- Bin-Wall: 27 Design C Bins, 12 Design B Bins
- Total length approximately 117m
- Maximum wall height 4.979m

**Find out how Bin-Wall can be used on your next project. Contact us today!**



Armtec is a leading national manufacturer of a comprehensive range of infrastructure products and engineered construction solutions for customers in a diverse cross-section of industries. With operations coast to coast, we are a trusted partner for transportation, public works, forestry, oil and gas, and mining operations throughout the country and abroad. Since 1908 our commitment to quality, customer service and innovation has set the benchmark in the Canadian drainage and bridge landscape.

Call **1-800-565-1152** or visit [armtec.com](http://armtec.com)