



Atlantic Industries Limited

PROJECT PROFILE



Culvert replacement upgrades to Dur•A•Span aluminum fish passage

When the BC Ministry of Transportation and Infrastructure (MoTI) wanted to replace failed twin galvanized culverts on Roy Creek near Courtenay, they opted for the 75+ year performance of AIL's Dur•A•Span Structural Aluminum Plate in a single Pipe Arch design.

Pipe Arch design provides improved hydraulics and habitat

The original 1.5 m round culverts were an impediment to both the water flow and the movement of coho salmon and cutthroat trout. The new structure needed to be sized to match the creek width and offer a natural stream bottom. The wide-bottomed design of a 4.67 m wide Pipe Arch fit the bill.

To help hold imported stream cobble and gravel, the structure was fitted with 0.345 m tall aluminum plate fish baffles. Northwest Hydraulic Consultants (Graham Hill, P.Eng. and David Vincent, P.Eng.) did the hydrotechnical design for the new structure and environmental design was by Sean Wong, Senior Biologist, MoTI. AIL provided the design, supply and construction-monitoring package.

Project at a glance:

Name: Roy Creek Fish Passage

Owner: BC Ministry of Transportation and Infrastructure (MoTI)

Environmental Design: Sean Wong, Senior Biologist, MoTI

Hydrotechnical Design: NHC, Northwest Hydraulic Consultants

Product/Application: Dur•A•Span Pipe Arch, Fish Passage

Sector: Public Works

Dimensions: Span 4.67 m, Rise 3.05 m

Installation Time: Two weeks (start to finish)



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Structure installed in two weeks

The structure was installed over a two-week period with Simon Stubbs Consulting Ltd. providing field services and AIL providing on-site assembly assistance, monitoring and certification of the completed structure.

MoTI's Sean Wong was pleased with the results, "Overall the site is much safer and more stable as well as a major improvement for hydraulics, fish habitat and passage and should be that way for the 75+ year design service life."

Corrosion/abrasion-resistant Dur•A•Span

With proven performance in over 10,000 installations worldwide, Dur•A•Span Structural Aluminum Plate is recommended for sites with corrosive soil and/or water. It is available in: Box Culverts, Standard or High Profile Arches, Rounds, Vertical Ellipses, Pipe Arches and Pear Shaped. Spans can exceed 12.2 m.



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