



PROUD CONTRACTOR FOR

# THOMPSON RIVER RETAINING WALL PROJECT

### Project Description:

The construction of a new 7.1 million dollar 1300 metre long retaining wall over an existing metal bin wall along the Thompson River approximately 11 km west of Spences Bridge. The contract carried a penalty schedule and was executed in two winter phases - 2003 to 2005 – timed to the lowest levels of the river. The design life of the new wall is 75 years.

### Design Details:

A precast panel method was chosen by IOTA for this project over CIP option. A total number of 421 panels were cast in Pioneer's yard in Chilliwack and transported to site. The panels were 300 mm thick by approximately 3 m wide and up to 8.5 m in height. Computerized solid modeling was employed to pre-visualize the wall and ensure smooth uniform curved structure. Precast panel production and installation experienced zero failure. The panels were placed on CIP footings cast during the low water periods and tie back soil anchored (871 units by approx 10 m long) thru the new concrete panels and old bin wall structure under the existing highway.

Creating a workable controlled densified fill was a challenge as the specified pea gravel was not economically viable. After much experimentation workable local cementitious gravel mix was developed and compacted into the void between the precast panels and the existing metal wall.

Heavy rip rap was placed below the new wall to protect the foundation from erosion. Once all CIP panel joints and top cope beam work was completed adjacent two lane highway was milled, re-shaped, partially widened and newly asphalted.

**The result is a rehabilitated wall that is aesthetically pleasing while satisfying strict engineering demands.**

### Key Subcontractors:

Soil Anchors - Kani Foundations Technologies Inc.

Asphalt - BA Dawson Blacktop Ltd.

### Key Support Services:

3D Computer Modelling – Lindek Technical Graphics Ltd.

Surveying – Crowfoot Developments Ltd.

Panel Shop Drawings – CWMM Consulting Engineers Ltd.

Traffic Control – Controlling Traffic Ltd.

Concrete and CDF Design – Metro Testing Laboratories Ltd.

Inspections – Valley Testing Services Ltd.

Environmental – Summit Environmental Consultants Ltd.

Numerous others whose work was brief but important

Owner: MoT – BC

Ministry Rep – E.C. Technical Ltd.

Design – Westmar Consulting Engineers Ltd.



## Final Panel Installed



## The Great Wall of the Thompson



**PIONEER PRECAST PRODUCTS, a div of IOTA**  
CSA STRUCTURAL ELEMENTS MANUFACTURER SINCE 1994

# IOTA CONSTRUCTION LTD

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