

**Commercial Buildings****Reference Details:**

Owner Translink
Vancouver, BC/Canada
+++ General Contractor SAR
Transit, JV +++
Consulting Engineer
J.Muller International,
California

DSI Services Supply of more than 7,000 4-0.6" and 19-0.6" anchorages; Supply of 117 tons THREADBAR[®], leasing of 14 jacks and grouting equipment.



DYWIDAG Post-Tensioning for Elevated Guideway

New SAR Transit Skytrain, Vancouver, BC, Canada

The new Skytrain is 21 km long connecting Vancouver, Burnaby, and New Westminster with Coquitlam. The elevated track, designed for a service life of 100 years, runs mostly through industrial areas and along existing traffic routes and has 13 stations.

Using innovative construction methods, such as an installation gantry for the prefabricated segments, the burden on the neighboring municipalities was reduced to a minimum. Mainly precast concrete elements were used to build the Skytrain. A total of 500 piers were spaced at 37 m.

On average 12 precast segments each with a length of 3.2 m were placed into position and stressed with DYWIDAG-THREADBARS[®] for structural continuity using a total of 6,000 segments. Each precast segment was manufactured at the SAR Transit prefabrication plant carefully considering curvature and inclination requirements for each segment. A special challenge for DSI engineers and placers was the condensed construction schedule and the logistical demands resulting from that. Large material shipments had to be delivered just in time. The entire process was subjected to a stringent quality management program in accordance with ISO 9000.

The accelerated construction progress made it necessary to use duplicated jacks and grouting equipment in order to work parallel at various sites. The equipment maintenance had to be synchronized with the overall construction schedule to rule out any possibility of a delay.

Construction started on September 15, 1999 and the project was completed in April 2001. Only 53 weeks were required for the installation of the 6,000 segments.