Almita MANUFACTURING LTD.

ATCO Electric Ltd.

Dover-Whitefish Project

The Situation

At the time of construction, ATCO Electric's 240 kV Dover-Whitefish project was one of the largest high voltage power transmission lines in Alberta. Spanning over 347 kilometers and including nearly 1,200 H-Frame, 3-Pole, and lattice structures, the project was complex and challenging. The project was hampered by limited access, uneven terrain and diverse soil conditions. River crossings and environmentally sensitive areas added to the complexity. Foundation construction had to be completed in a single winter season, as more than half of the transmission line crossed muskeg areas.

The Solution

Almita's team worked with ATCO Electric's civil-structural engineers to supply and install screw pile foundation systems that suited the unique soil conditions along the line's route.

Aided by Almita's highly advanced technology, the fabrication team kept the schedule on track with rapid, efficient production of consistently high quality piles. When unexpected soil conditions were encountered in the field, the expanded shop facility quickly accommodated requests for last minute design changes.

Almita's installation crews worked in two shifts, 24-hours-a-day, in temperatures as cold as -40º C. Despite these demanding conditions, the team managed to allocate 3,100 piles to specific locations, install the piles, cut them to elevation, and weld on caps. They accomplished this in a mere 10 weeks.

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Testimonial

"I would like to thank Almita for their contribution on the Dover-Whitefish Project. This was the largest transmission project in ATCO Electric history. It entailed construction of 347 km of transmission line in just four months. Challenges such as the tight schedule and adverse working conditions mean the material manufacturing sequencing was a critical element in overall project success. Installation was efficient and, in addition, we were able to minimize ground disturbance by using screw piles."

C. Albert Lai
Manager, Transmission and Distribution Projects
ATCO Electric Ltd.

The Result

Almita's meticulous fabrication and swift, precisely targeted installation of screw piles and caps ensured the project came in on time and on budget.

Not only was Almita's installation process faster than other alternatives, it was also environmentally sensitive. The installation process created minimal noise pollution and no vibration. Almita's rapid installation speed never compromised the accuracy of the installation. On average, 80 percent of Almita's screw piles are less than 15 mm off-target.