



TRANSIT

QUICK FACTS

**AVERAGE ANNUAL
RIDERSHIP:**
300,000

**PRECAST
STRUCTURES:**
6,700 m²

**TOTAL
PROJECT VALUE:**
\$1,400,000,000

**CONSTRUCTION
VALUE:**
\$48,000,000

**PROCUREMENT
MODEL:**
DBFOM

LAFARGE'S ROLE:
SURFACE WORKS
& PRECAST
CONTRACTOR

**LANE KILOMETRES
CONSTRUCTED:**
10
LANE-KILOMETRES

**COMPLETION
DATE:**
2013

CALGARY WEST LRT

CALGARY, AB

PROJECT OVERVIEW

At the time, the \$1.4 billion West LRT project was the largest infrastructure project the City of Calgary had ever taken on. This integrated transportation system includes a new LRT line, reconfigured bus routes to accommodate the new stations, expanded and improved walking and biking trails, and an enhanced highway/road network. All of these improvements and new developments are connecting Calgarians traveling to and from the west end of the city to the rest of Calgary.

Calgary's entire LRT system transports about 300,000 passengers each weekday, making it the most-traveled LRT system in North America and Lafarge is proud to have been involved in such a massive and crucial project.

Lafarge constructed surface works including roadway construction, curbs and gutters, and precast arches and station infrastructure for the project.





EFFECTIVE LEADERSHIP

PROJECT SPONSOR/VP



BOB SPENCE

CALGARY WEST LRT

QUALIFIED CONSTRUCTORS WITH UNIQUE PRODUCT OFFERINGS

The Calgary West LRT line consists of 7.7 km of new track starting downtown at 7 Ave. and 10 Street, running west up to 69 Street and 17 Ave. in Strathcona Park. The project features six new stations, including the first elevated and first underground stations in Calgary's LRT system.

Lafarge played a major role in the design-build project. We supplied concrete for the tunnels, bridges and other structural concrete needed to build the new LRT system. Lafarge Precast has worked on a number of LRT stations, and was again involved in providing components for the new stations. Lafarge Pipe provided the pipe and manhole systems required for a new deep utility system.

Precast concrete added to the unique architecture with horse shoe oval arches and station platforms with tactile strips in all of the stations as well as retaining walls with a stone finish on the 69 Street Station. Precast concrete girders and deck slabs were used on the 17th Ave/Sarcee interchange.

All seven of Lafarge's product lines were involved in the project and played an integral role in the construction and building of the structures and roads.

Most importantly, Lafarge played a crucial role in keeping the project in motion, constructing the surface work, materials and logistical support to execute the roadworks portion of the project efficiently and safely, under a subcontract worth approximately \$48 million.



QUALITY ACROSS SCOPES

- SOPHISTICATED PROJECT SCHEDULING TOOLS
- COLLABORATIVE SCHEDULING
- POWERFUL RESOURCE ALLOCATION AVAILABILITY
- PROJECT SPECIFIC HEALTH AND SAFETY PLAN
- ONGOING COMMUNICATION WITH STAKEHOLDERS AND FELLOW CONTRACTORS

CALGARY WEST LRT

LARGE SCALE EXPERTISE AND SCHEDULING

At the West LRT project, Lafarge Construction was responsible for constructing surface works, which included reconstructing roadways, construction detours, and providing all the aggregates, asphalt, concrete curbs, gutters and barriers needed along the 7.7 km route.

Execution of the surface works in a safe, efficient and expedient manner was essential to the success of the project. We needed to keep the traffic flowing so that construction of tunnels, utilities and stations could be completed. This posed a huge logistical challenge as the West LRT followed a tight timeline.

In order to prepare for this level of streamlined execution, our group spent four months studying the details of the West LRT project, including set-up and how to proceed with the work to ensure project success.

As part of this preparation, our precast and pipe teams - at our plants, the largest facilities of their kind in Western Canada - conducted thorough inspection processes on their components. All of our precast concrete production process is thoroughly inspected by our quality control team to ensure that our utility trenches are produced in accordance with the specific engineered drawings. As dictated by our CPCI certification, all concrete utilized in a precast concrete production is tested prior to pouring to ensure it meets the project criteria. Similarly, prior to stripping and shipping, the cylinders taken during pre-pour testing process are tested to ensure they meet the appropriate level of strength.



UNIQUE CHALLENGES:

- ACTIVE ROADWAYS
- HIGH VOLUME URBAN TRAFFIC AREAS
- INTEGRATION OF STAGING AND TRAFFIC FLOWS
- EFFECTIVE CLOSURE TECHNIQUES
- ONGOING PUBLIC ENGAGEMENT

CALGARY WEST LRT

RESOURCE POSITIONING AND SAFE SITES

Not only were we the sole one-stop provider of the broad variety of materials requirements needed for such a highly complex project, Lafarge also had the ability to supply the skilled labour force and equipment to get the job done efficiently and safely.

We employed 60 permanent, full time employees tasked at four separate projects along the 7.7 km job site. Having Lafarge as the sole contractor provided all of these advantages to the joint venture team in charge of the project.

Lafarge has a comprehensive safety culture, setting the industry standards for safety. The LRT project was a straightforward fit for us. We evaluated all our work methods before commencing operations. Adding to the safety challenge, much of the surface construction took place along one of the busiest traffic corridors in the city. Our broad focus was not limited to worker safety - we are also committed to public safety.

The Calgary West LRT project was completed on schedule and today transports more than 40,000 riders per day.







PROJECT IMAGES

CALGARY WEST LRT

