

Metrolinx East Rail Main-tenance Facility



Americas

Transport

The Greater Toronto and Hamilton Area continues to grow at a rapid pace, requiring ongoing expansion of the commuter rail service, operated by GO Transit.

Plenary Infrastructure was selected through a competitive process to deliver a new maintenance facility for GO Transit’s commuter rail network.

Project facts

Location

Whitby, Ontario, Canada

Client

Metrolinx

Value (NPV)

C\$859 million

Consortium

Plenary Infrastructure

Plenary Americas' role

Project sponsor

Equity investor

Financial arranger

Co-sponsors

Plenary, Kiewit Canada Development Corp., Bird Capital Limited Partnership

Builder

Bird Design-Build Construction Inc./Peter Kiewit Infrastructure Co.

Architect

Stantec Consulting /ARUP Canada Inc

Services

Honeywell Limited/Toronto Terminals Railway

Financial close date

March 2015

Completion date

March 2018

Contract terms

32.5 years, DBFOM

Awards

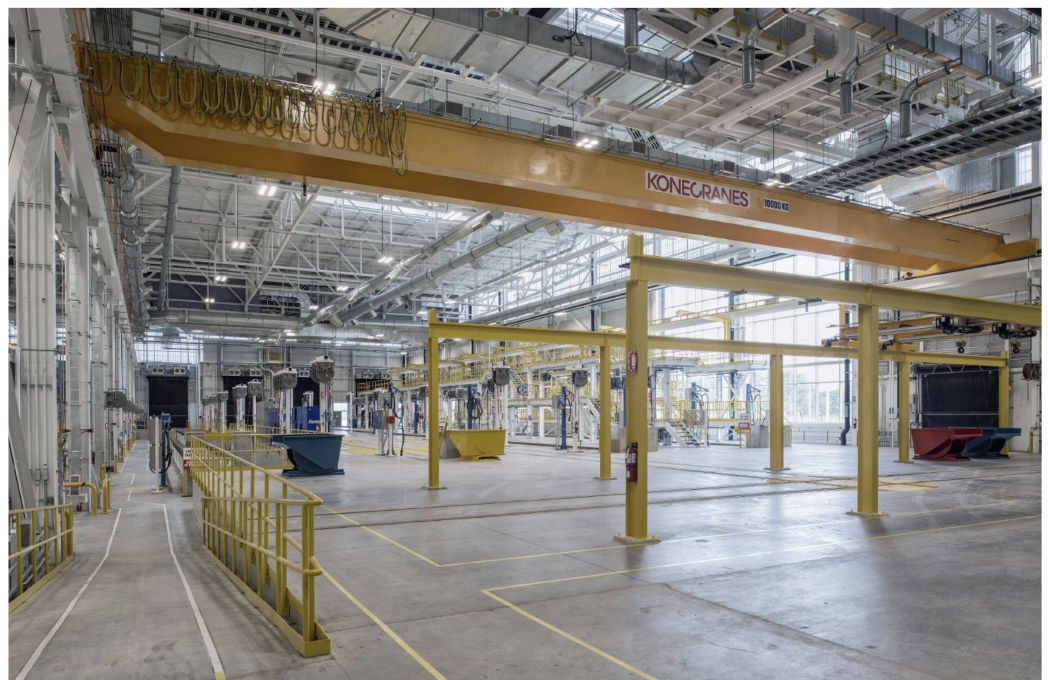
- Top 100 Projects – 2016 ReNew Canada

Project website

www.gotransit.com

The facility includes approximately 500,000 square feet of new buildings. The project also includes:

- tracks and storage for thirteen 12-car passenger trains;
- built-in capacity to store an additional nine passenger trains for future use;
- stations to repair, maintain, fuel, wash and power GO trains; and
- staff and visitor parking; and sustainable design and construction features.



Design features

The East Rail Maintenance Facility (ERMF) Project is targeting a Gold certification level under the Leadership in Energy and Environmental Design® rating system.

The roof has been surfaced with highly reflective materials that reduce the local heat island effect by significantly limiting absorption of solar radiation.

Rainwater from the PM Bay roof, canopy roof, and consist wash roof (about 10,000 m² of roof area) will be harvested and reused in wash stations, and administration building washroom flush-fixtures.



The diversion and storage of rainwater contributes to stormwater quality and quantity control and limits the disruption of natural hydrology. The burden on municipal storm water infrastructure is further alleviated by the extensive use of open space vegetated areas and a retention pond.

Bicycle storage and showering facilities, transit access, preferred parking for carpoolers and electric vehicle charging stations have been provided in sufficient quantities and convenient locations to meet the needs of the building occupants.

Innovations

The East Rail Maintenance Facility is situated in one of the most publicly viewed locations in Whitby. The architecture celebrates the impressive scale of the facility rather than attempt to reduce or mitigate that reality. The singular gesture of the uninterrupted curved roof line and the consistent façade elements combine to create a massing that has a strong sense of presence and identity.

The design for the ERMF facility has taken into consideration the future expansion plans for the site and provided adaptability in the design to accommodate the proposed future works. The contemplated future expansions include a load test cell building, exterior turntable, an additional canopy and track storage, additional progressive maintenance bays, and waste management areas. The current works and facilities were planned such that future construction will minimize the impact on ongoing operations of the ERMF site.

In addition to the future physical expansion of the facility, a thorough consideration of future electrification of the GO Transit system has resulted in a design that allows all necessary work to be carried out at the initial stages of construction, allowing future installation to be carried out with minimal interruption to the operation of the train facility at that time.

Local economic impacts

At the peak of construction, approximately 1,000 workers were on-site, the majority of which came from the Greater Toronto and Hamilton Areas.