Plenary Infrastructure was selected through a competitive process to deliver a new maintenance facility for GO Transit’s commuter rail network. 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;
- 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 will be 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 100,000 ft² 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 will be provided in sufficient quantities and convenient locations to meet the needs of the building occupants.
INNOVATIONS
The ERMF 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 are 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 will be on-site, the majority of whom will come from the Greater Toronto and Hamilton Areas.

RELATED PROJECTS
Waterloo Light Rapid Transit
Waterloo Region, Ontario, Canada

Gold Coast Light Rail
Queensland, Australia

North West Rail Link
New South Wales, Australia

"THE EAST RAIL MAINTENANCE FACILITY PROJECT IS TARGETING A GOLD CERTIFICATION LEVEL UNDER THE LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN® RATING SYSTEM."