

# ACEC Awards 2015

## GO Pickering Parking Garage



## ACEC AWARDS 2015

GO Pickering Parking  
Garage



The Pickering GO station is one of the busiest transit mobility hubs in the GO-Metrolinx system, with over 20,000 passengers a day using the station.



## SUMMARY

### *Accommodating future commuters*

#### 75 Word Summary

GO Metrolinx needed to develop a parking structure that encouraged use of public transit, had room for enough parking spaces for the foreseeable future and was esthetically pleasing. Located adjacent to, and connected via link-bridge with the Pedestrian Bridge over the 401 highway, this new facility at Pickering GO station provides 1650+ parking spaces within a six storey structure that incorporates covered barrier free parking, provision for future charging of electrical vehicles and a photovoltaic power generation system connected to the OPG electricity network.



## INNOVATION

This parking garage represents a well-balanced, innovative approach to parking structures that benefits the community as a whole. AECOM provided complete consulting services for the design and construction that included all architectural and engineering disciplines. We also provided resident inspection services throughout the construction phase.

A customized design of the pre-cast cladding system was used to soften and enhance the look of the building. In addition, architectural elements including curtain wall, airfoil louvres and aluminum cladding systems were integrated into the design to create a harmonized appearance. This cladding allowed the designers to change the look of what is essentially a very standard pre-cast structure.

Soil conditions on site were poor and a deep-foundation design utilizing caissons was needed to compensate. AECOM worked closely with the pre-cast supplier (ARMTEC) to develop both the main

structural elements and interface with the foundation design. We also worked with ARMTEC on unique textures and profiles for the main wall panels.

Services provided within the parking structure included machine-room-less elevators, CCTV and Intercom in addition to a comprehensive vehicular and pedestrian signage. Retail space is provided for future use as a possible commercial revenue stream. A 125 kW diesel fuel fired emergency generator was provided it its own room with a recirculating ventilation system with acoustic applications.

The project was designed and built on budget and on schedule.

A modern and contemporary look was achieved by an innovative approach.



## COMPLEXITY

Numerous utilities were involved, including Enbridge, Veridian, and the Region of Durham. Co-ordinating the removal and re-starting of this many utilities required a high degree of scheduling proficiency.

Due the enormous footprint of the building, almost half the site was consumed by not only the actual construction area, but also for laydown space and contractor areas. This further impinged on the already compromised space in terms of both parking and passenger vehicle circulation. During construction additional off-site parking was established that minimized disruptions to GO patrons.

Site access was very constrained. With the increase of vehicle volume, traffic studies were conducted by AECOM, and results shared with stakeholders the City of Pickering and Region of Durham. These traffic studies resulted in the re-design of key traffic interfaces with the site and Bayly Street, which is the only main road access.

The phasing of construction, and hence the design, needed to take into account the need to keep the station site open for business as much as possible. The risk of losing patrons is a concern for GO-Metrolinx, so every measure had to be taken to design-in the ability to build specific elements at different times.

Access and egress to the site was facilitated by undertaking a full Traffic Impact Assessment and Analysis. Changes to the local traffic configurations were then incorporated after liaison and agreement with the Regional Municipality of Durham.

**This is one of the biggest buildings that GO-Metrolinx has built.**



## SOCIAL AND/OR ECONOMIC BENEFITS

Social quality of life is improved because commuters have free and easy access to parking. People can walk freely from vehicles to the trains, in a covered pathway. The design of this garage enhanced the movement of commuters from the neighbourhood to the GO station.

Economically, GO has the ability to generate revenue from future retail opportunities. The design of the building is flexible to incorporate store-front retail business.

## ENVIRONMENTAL BENEFITS

The environment benefits when commuters are encouraged to use public transit. Ideas and systems that make using public transit easier attract more riders.



A parking garage that encourages commuters to stay out of their cars is good for the economic, social and environmental quality of life.



## MEETING THE CLIENT'S NEEDS

The client's main need was to have a parking garage designed and built to accommodate a net increase of at least 1200 vehicles, and hold the building to a high design standard so that it blended into its surroundings and created a strong and contemporary image for GO-Metrolinx. The client needed a garage that would accommodate parking demand well into the future, and alleviate significant parking congestion.

The solution was a well-balanced, innovative approach to design the building. The building itself is massive – 47,500 square metres overall area and five stories are needed to accommodate the 1650 car parking spaces. The beauty of this design is that the building doesn't appear imposing at all – it blends into the surroundings, and doesn't stand out amongst its' neighbours. This was accomplished through a variety of techniques. A pre-cast cladding system with architecturally designed enhancements was used for the facades of the building. This helped to visually minimize size and mass of the building.

Services provided within the parking structure included machine-room-less elevators, CCTV and Intercom in addition to a comprehensive vehicular and pedestrian signage. Retail space is provided for future use as a possible commercial revenue stream. A 125 kW diesel fuel fired emergency generator was provided in its own room with a recirculating ventilation system with acoustic applications.

The Pickering GO station is one of the busiest transit mobility hubs in the GO-Metrolinx system, with over 20,000 passengers a day using the station. By creating such a parking facility, commuters are encouraged to use the facility, and difficulty finding a parking spot is no longer a problem.



**“AECOM provided complete consulting services for the design and construction that included all architectural and engineering disciplines. The project was completed to our satisfaction, on time and on budget.”**

*Alan Dick, P.Eng., Project Coordinator, Parking Infrastructure, GO Transit, A Division of Metrolinx.*

# ACEC AWARDS 2015

## About AECOM

AECOM is a premier, fully integrated professional and technical services firm positioned to design, build, finance and operate infrastructure assets around the world for public- and private-sector clients. With nearly 100,000 employees — including architects, engineers, designers, planners, scientists and management and construction services professionals — serving clients in over 150 countries around the world, AECOM is ranked as the #1 engineering design firm by revenue in Engineering News-Record magazine's annual industry rankings, and has been recognized by Fortune magazine as a World's Most Admired Company. The firm is a leader in all of the key markets that it serves, including transportation, facilities, environmental, energy, oil and gas, water, high-rise buildings and government. AECOM provides a blend of global reach, local knowledge, innovation and technical excellence in delivering customized and creative solutions that meet the needs of clients' projects. A Fortune 500 firm, AECOM companies, including URS Corporation and Hunt Construction Group, had revenue of approximately \$19 billion during the 12 months ended Dec. 31, 2014.

More information on AECOM and its services can be found at [aecom.com](http://aecom.com).



