

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: September 24, 2009

SUBJECT: TORONTO-YORK SPADINA SUBWAY EXTENSION PROJECT
YORK UNIVERSITY STATION
APPROVAL OF CONCEPTUAL DESIGN

ACTION ITEM

RECOMMENDATION

It is recommended that the Commission approve the conceptual design for York University Station which will be presented through the public consultation process.

FUNDING

Sufficient funds for this expenditure are included in the Toronto-York Spadina Subway Extension (TYSSE) Project, as set out on pages 1479 to 1482 of the TTC 2009-2013 Capital Program (Category - Expansion) which was approved by City Council on December 10, 2008.

BACKGROUND

The TTC is planning the design and construction of an underground subway line from the existing Downsview Station on the Spadina Line located in the City of Toronto, to the proposed Vaughan Corporate Centre located in the City of Vaughan, Region of York as shown in Exhibit 1. The new 8.6 km long line will include both tunnelled and cut and cover sections.

The Toronto-York Spadina Subway Extension (TYSSE) project is being funded by the Federal Government, the Province of Ontario, the Regional Municipality of York and the City of Toronto. The TTC is managing the design and construction of the YYSSE project and will own and operate the subway extension.

At the Commission Meeting of October 23, 2008, Contract A85-75E for the design of York University Station was awarded to the design team lead by Arup Canada Inc. The architectural firm for this team is Foster & Partners.

The Station Design Philosophy is covered in more detail in a separate report to the Commission.

The design consultants were presented with the TYSSE Station Design Philosophy which emphasises the following elements defined in TTC Design Standards:

- Integrated design of all elements with strong aesthetics and public artwork;
- Column-free structures wherever possible with high ceilings and simple flow of space;
- Bright, open spaces with daylight penetrating deep into stations where possible;
- Barrier-free with at least one fully accessible entrance;
- Use of TTC standard elements; and
- Sustainable design to meet the Toronto Green Standard.

In developing this concept, staff and the station designer have met and reviewed concepts with the major stakeholders including York University Development Corporation (YUDC), and City of Toronto Planning.

DISCUSSION

York University Station is located entirely on York University lands crossing underneath Ian MacDonald Boulevard in the heart of the campus underneath the Harry W. Arthurs Common per the Site Plan in Exhibit 2. The York University Station is intended to remove the existing bus service currently circulating through the Common, and to provide pedestrian access for existing and future facilities and developments on the York University campus. The necessary bus service will be relocated to the island bus platform at Steeles West Station.

Exterior – Exhibit 3 – Aerial View

The main entrance is located on the west side of Ian MacDonald Boulevard and is centered on the station box with two covered entry wings rising up to the north and south side of the Common. The entrance also has an excavated lightwell from the Common providing daylight into the concourse and a view to Vari Hall. A swooping roof structure links the two entrance pavilions and the lightwell. This may be a green roof or a cool roof, as appropriate for final roof sizing and layout. Glazing on the east side of the entrance structure provides natural light down to the concourse level. Combined with the west facing lightwell in the Common these provide passenger orientation and opportunities for daylight harvesting per the Toronto Green Standard.

Interior – General

Station finishes, materials, colour and artwork will be further developed as part of the detailed design and will be included in a subsequent Commission report and presented at the second Public Open House.

Street Level - Exhibit 4 – Section
- Exhibit 5 – Street Level

Passengers enter the station through sliding doors at the entrance wings, one on the north side of the Common adjacent to York Lanes Mall, and one on the south side adjacent to the Accolade East building. The north entrance contains stairs and escalators down to the concourse level, and then via stairs to the fare array. The south entrance contains stairs and an elevator to provide a barrier-free route, linked with a ramp at concourse level, leading to the fareline and collector's booth.

A set of emergency stairs comes up from platform level to exit to grade in the plaza in front of the Provincial Archives Building and Research Tower. A second set of emergency stairs comes to the surface in front of the Schulich School of Business Building on the south side of York Boulevard. A secure bicycle parking facility will be provided adjacent to the north emergency exit building.

Concourse Level - Exhibit 6 – Concourse Level

Passengers enter the concourse level from the street via stairs, escalators, and an elevator from the two entrance wings which meet in an unpaid area lit by daylight from the glazed lightwell with a view through the Common towards Vari Hall. From here stairs lead down to the lower concourse level and the collector's booth and fare line. A barrier-free route is provided using a ramp connected to the elevator in the south entrance.

Moving through the fareline leads directly to three vertical circulation elements consisting of stairs, escalators and elevators to platform level via access bridges. The central bridge also provides access to a knock-out panel for connection to future development to the north east quadrant.

The concourse level is used for TTC service spaces, including the emergency ventilation fans, with a void allowing natural light to reach down to platform level

Platform Level - Exhibit 7 – Platform Level

The subway platform level is served by an elevator, four escalators, and stairs. Two enclosed emergency exit stairs are provided at each platform end.

Artwork

A public art selection process resulted in the selection of Jason Bruges as the public artist for York University Station. An art concept will be included in the second Public Open House for this project.

Project Impacts

This site is very constrained between the existing Schulich School of Business at the south end, and the new Provincial Archives, Research Tower and York Lanes to the north. There is potential for construction environmental impacts on the adjacent community. To mitigate environmental impacts, the following steps are being advanced during design development:

- An Environmental Management Plan (EMP) has been submitted and measures will be in place to address the effects of dewatering, stormwater management and erosion and settlement control.
- Instrumentation, inspection and response procedures will be in place to monitor and mitigate construction noise, vibration and dust control.

Cost and Schedule

The budget for construction of York University Station is \$86 million. The current estimate of construction costs for York University Station is \$115 million.

The main impacts to the original estimate and current budget are:

- Escalation of construction costs during the period 2006-2008 higher than budgeted;
- High water table;
- Toronto Green Standard.

As design progresses, additional value engineering studies will be undertaken to mitigate station costs. TYSSE and the station design consultant are currently working with York University stakeholders to progress a mutually acceptable design that maximizes cost savings and also maintains the basic integrity of the station design. If the project remains over budget as design develops, additional funds will be provided from budget contingencies.

The proposed project schedule reflects completion of preliminary design to 30% by December 2009, with completion of design development to 100% in July 2010. Substantial Completion is scheduled in November 2014.

Next Steps

Following the first Public Open House in November 2009, the design will be developed leading to a second Public Open House in spring 2010. A report will also be submitted to the Commission for finishes and artwork. A report is scheduled to be submitted for contract award approval in November 2010.

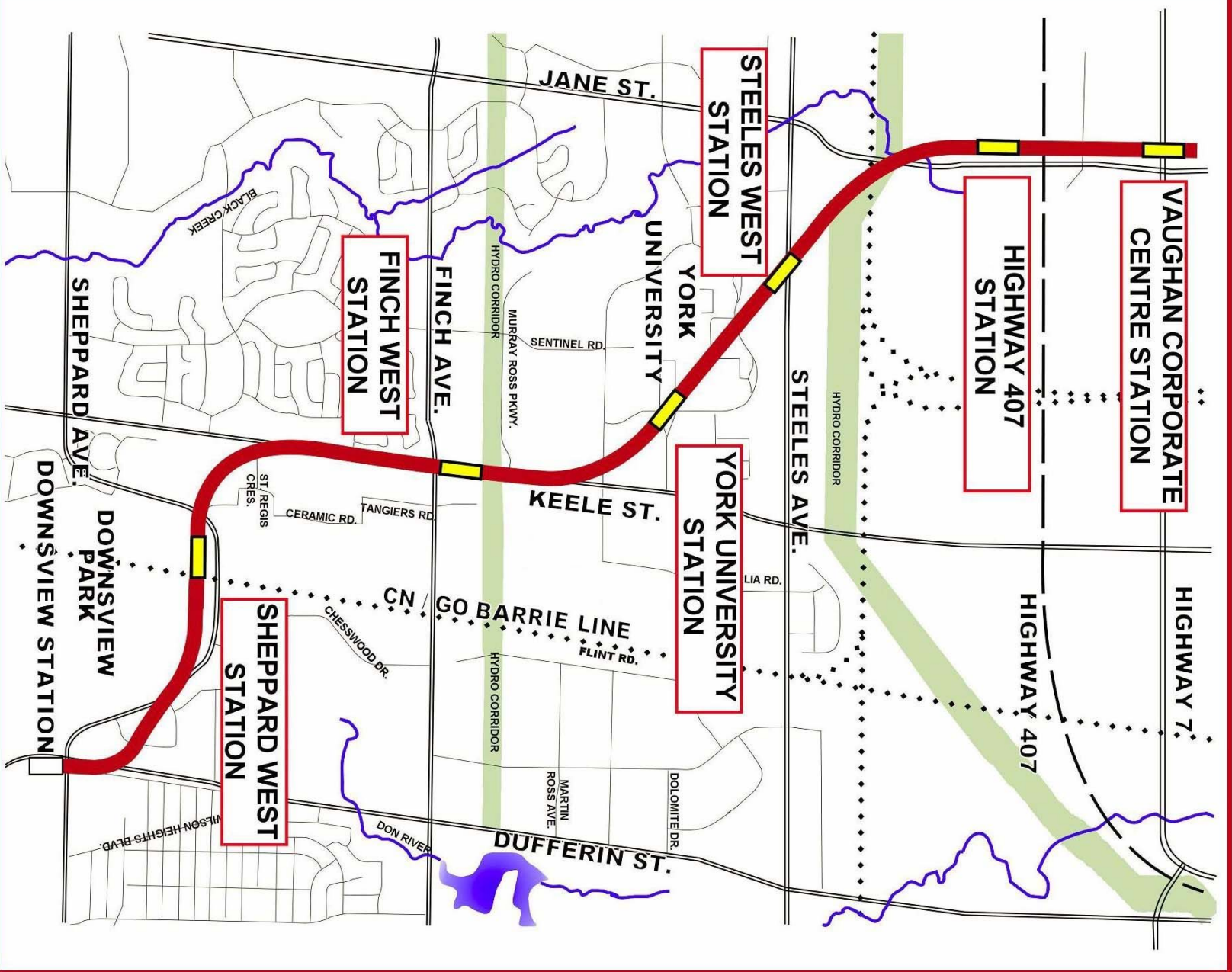
JUSTIFICATION

Approval is required to allow the station designers to progress their design and commence public meetings.

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Attachments: Exhibits 1 to 7

Exhibit 1 – TYSSSE Map

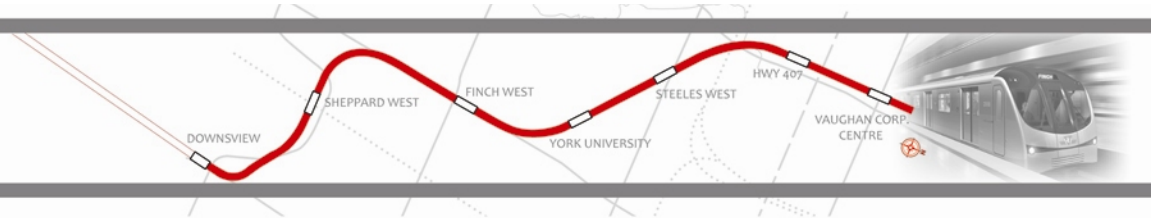


TORONTO-YORK SPADINA SUBWAY EXTENSION





Toronto-York Spadina Subway Extension



York University Station

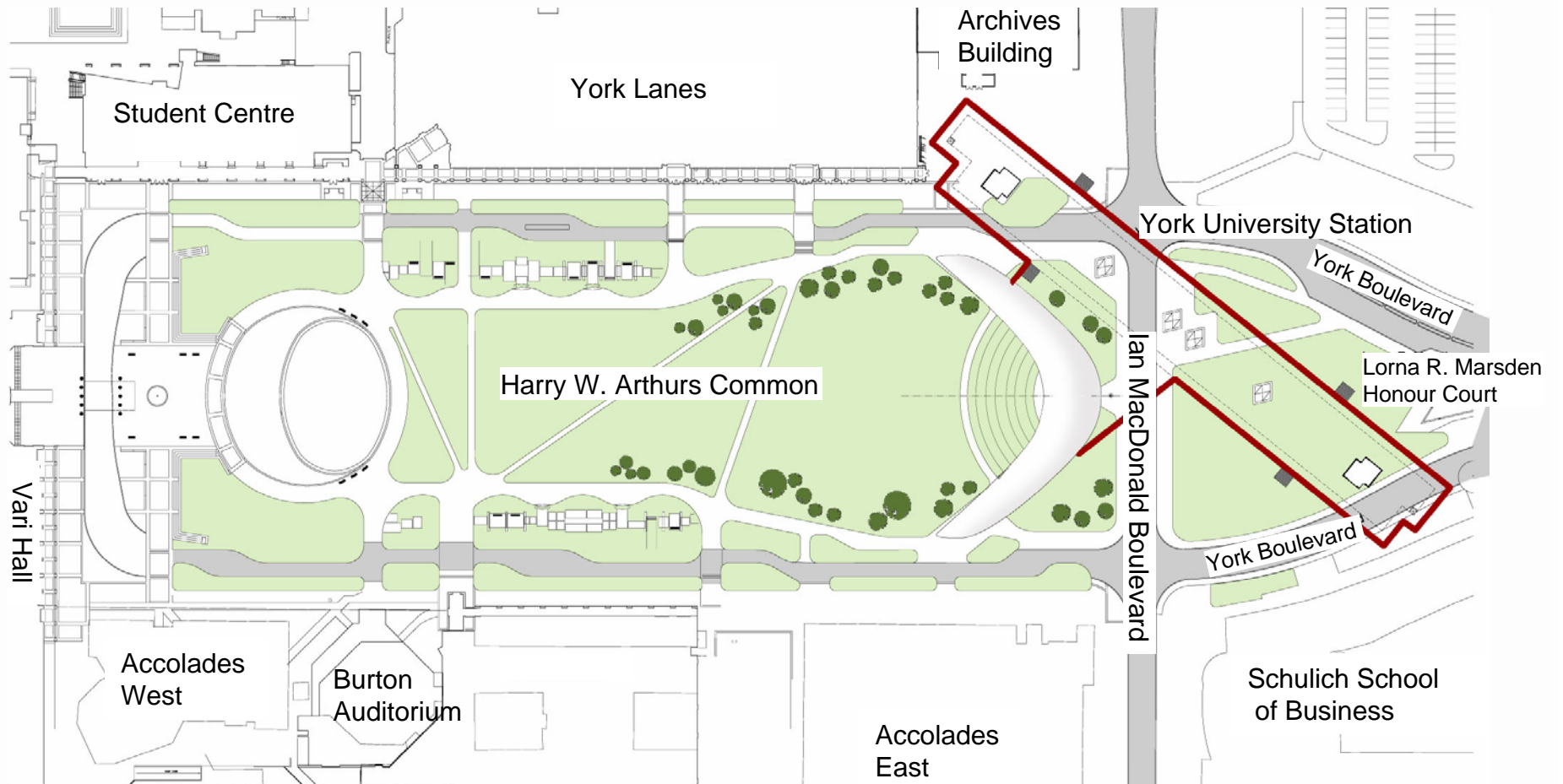
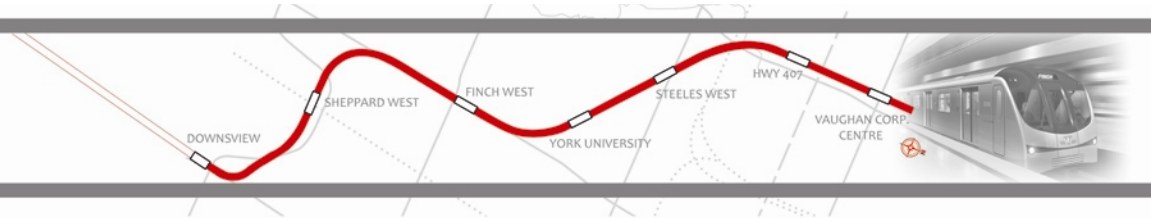


Exhibit 2 - Site plan



Toronto-York Spadina
Subway Extension



York University Station

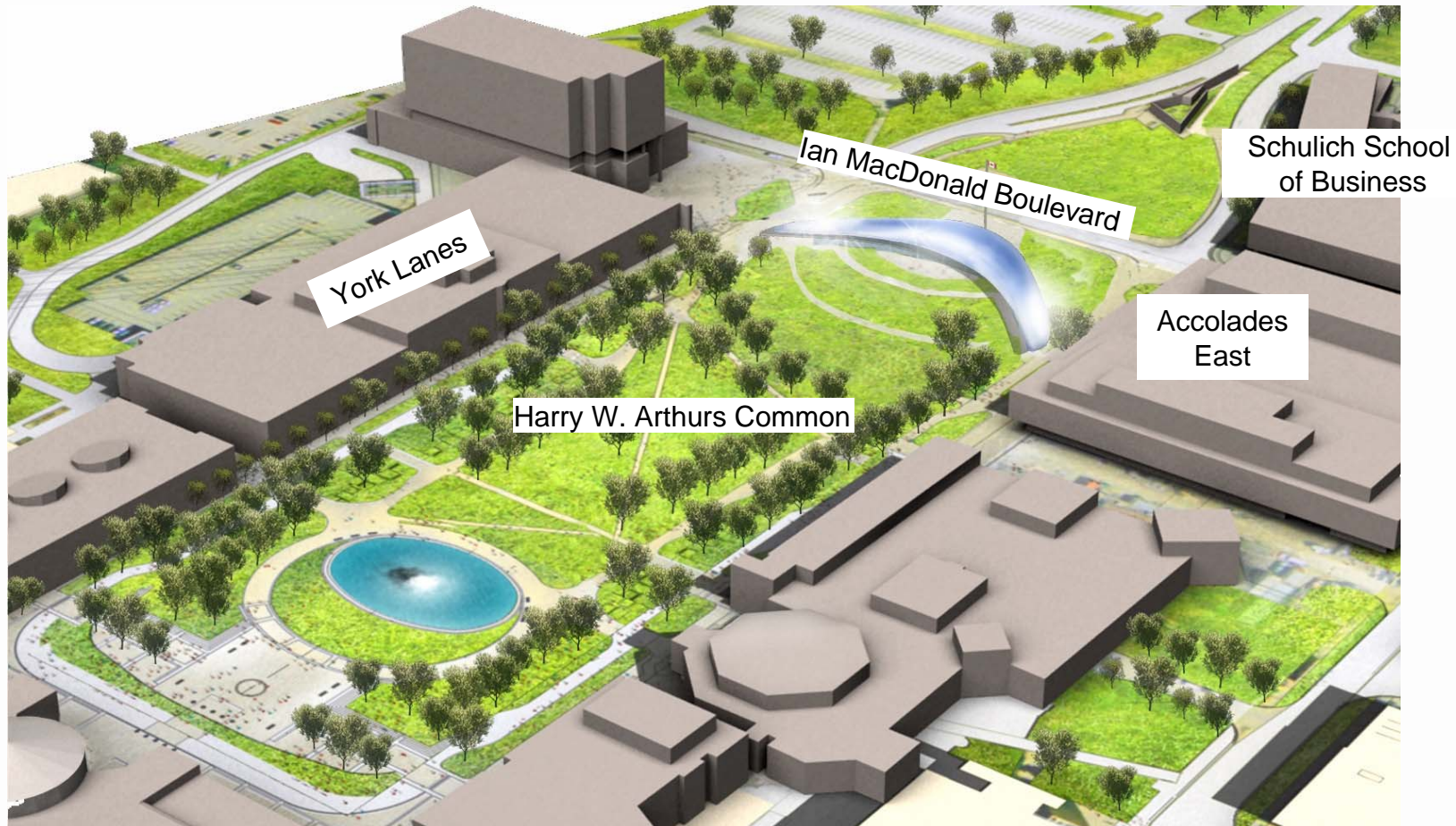
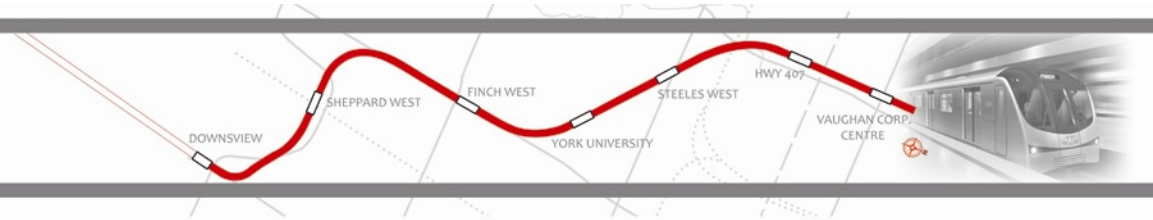


Exhibit 3 - Aerial View



Toronto-York Spadina
Subway Extension



York University Station

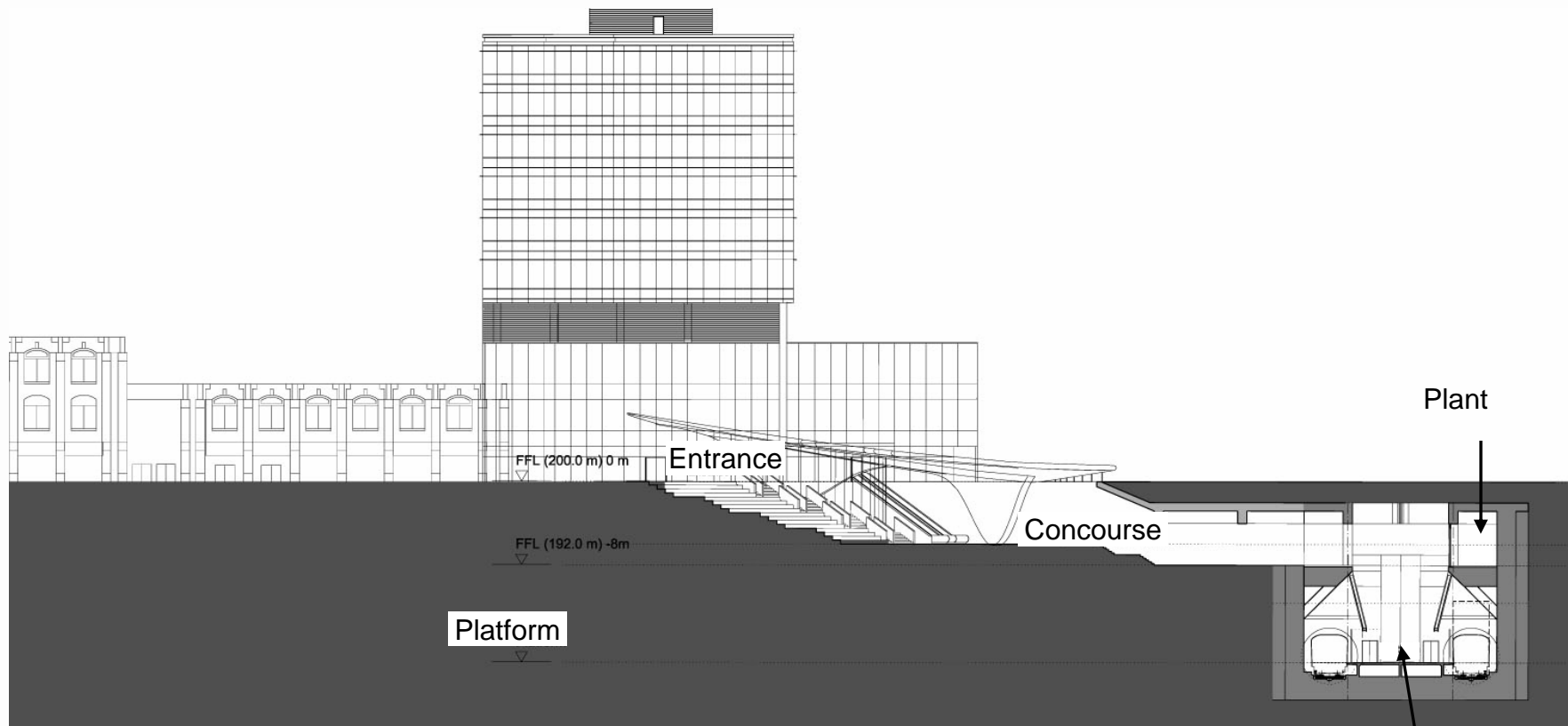
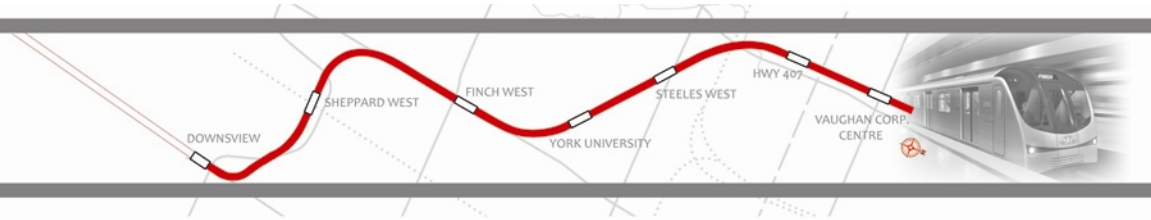


Exhibit 4 - Section



Toronto-York Spadina Subway Extension



York University Station

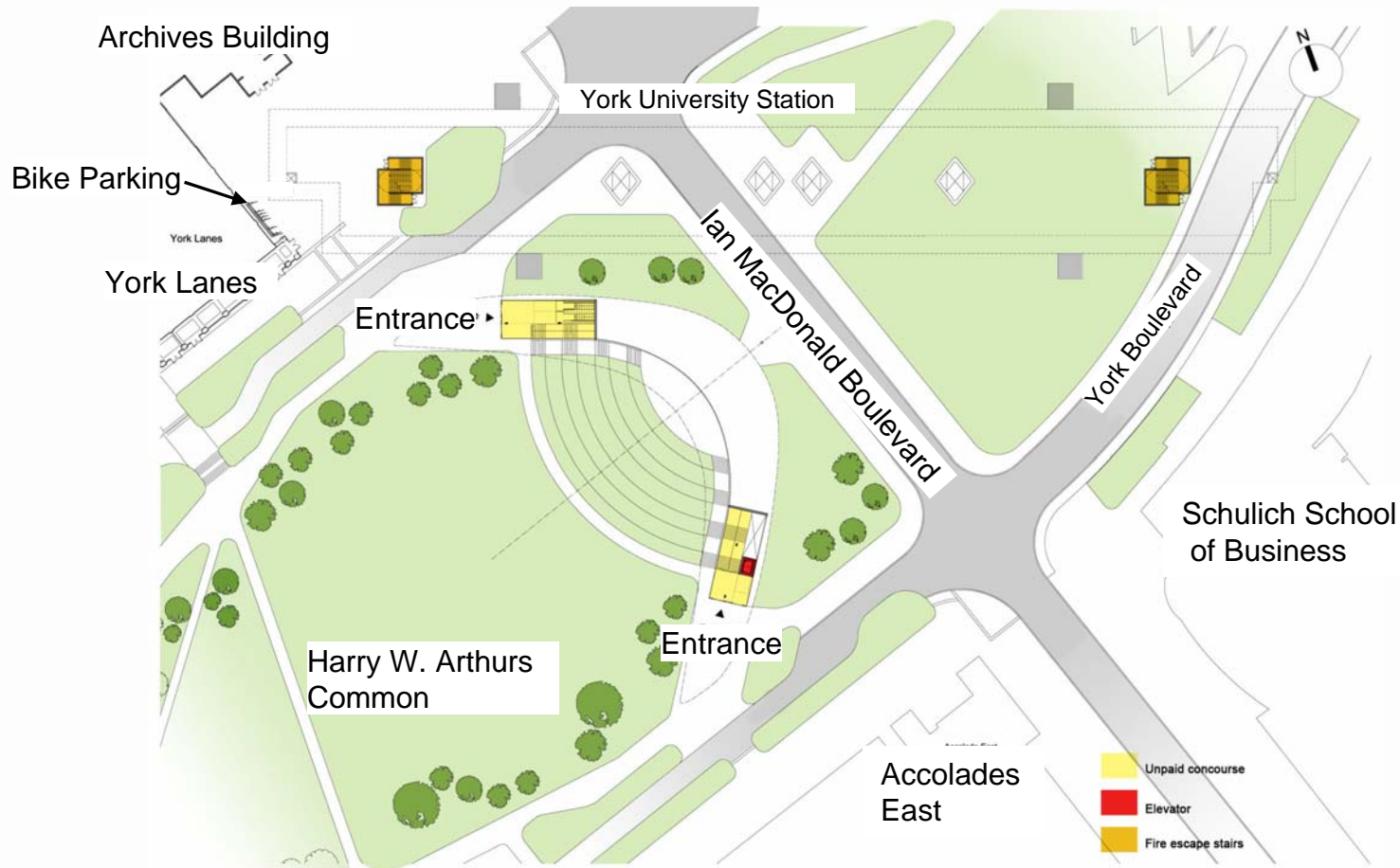
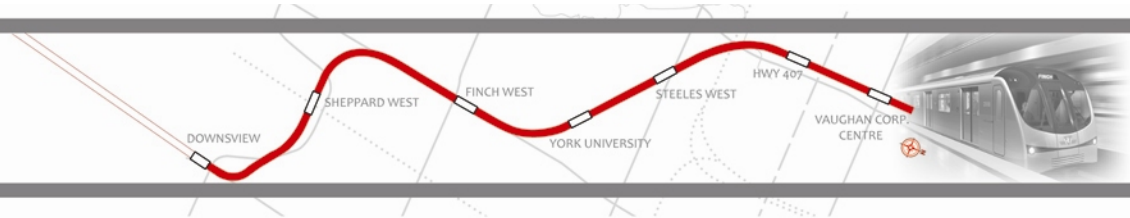


Exhibit 5 – Street Level



Toronto-York Spadina Subway Extension



York University Station

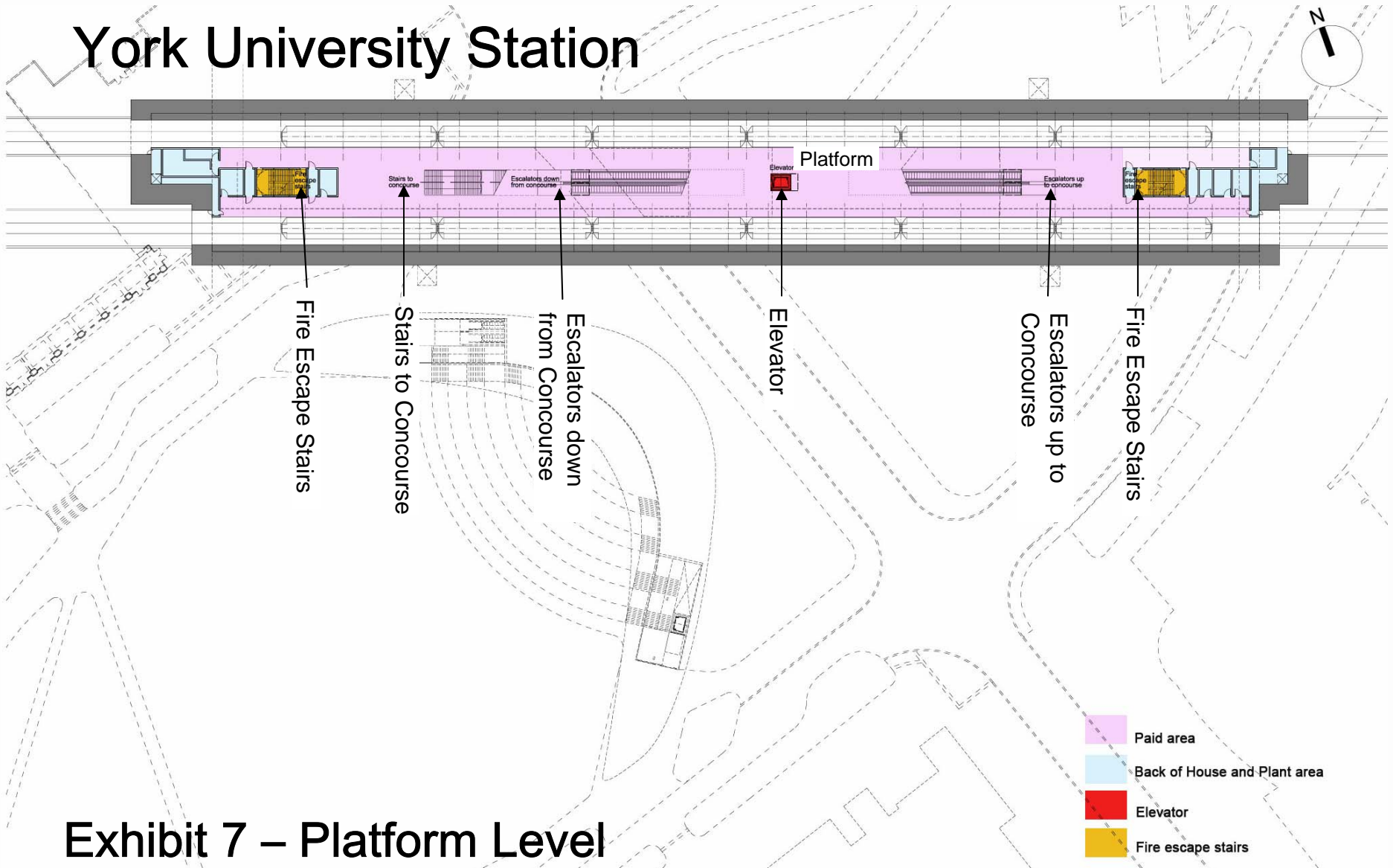


Exhibit 7 – Platform Level