

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: October 29, 2009

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

ACTION ITEM

RECOMMENDATION

It is recommended that the Commission approve the conceptual design for Steeles West 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 1439 to 1442 of the TTC 2010-2014 Capital Program (Category - Expansion) which was approved by the Commission on September 24, 2009.

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 A85-75A for the design of Steeles West Station was awarded to the design team lead by The Spadina Group Associates (TSGA). The architectural firms for this team are Richard Stevens Architects and Alsop Architects.

At its meeting of September 24, 2009, the Commission approved the TYSSE Design Philosophy with additional emphasis on achieving high quality architecture, urban design, streetscape, and landscape architecture as follows:

- Integrated design of all elements with strong aesthetics, high-quality urban design, 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 major stakeholders including staff from York Region, the City of Toronto, the City of Vaughan, and York University Development Corporation.

DISCUSSION

Steeles West Station is diagonally located under the intersection of Steeles Avenue West and North West Gate as shown on the Site Plan in Exhibit 2. The Steeles West Station is intended to provide access for existing and future facilities and developments, particularly along Steeles Avenue West. Station surface elements have been laid out in workshops with stakeholders to maximize the potential for transit oriented development (TOD) to occur.

Exterior – Exhibit 3 - Aerial View

Located in the hydro corridor to the north of the station, commuter parking for 1,905 vehicles and associated access roads are under development. The northwest entrance is located on the north side of Steeles Avenue West at the intersection with a new proposed Street "B" which provides access to the 6-bay YRT bus terminal, the on-street Passenger Pick Up and Drop Off (PPUDO) and the commuter parking. The YRT bus terminal also contains the TTC substation and associated service rooms with elements of the substation located on the roof of the bus terminal. The YRT bus terminal will be operated and maintained by York Region.

The southeast entrance is located south of Steeles Avenue West on the east side of Northwest Gate, adjacent to the 12-bay TTC bus terminal with bus access off Track & Field Road. The TTC bus terminal has been designed with a green roof.

A light cone structure is located on the southwest corner of Steeles Avenue West and Northwest Gate, to allow daylight to penetrate down to platform level and to provide for possible future connections.

Interior – General

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

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

The section shows two concourses, one at each end of the station, allowing utilities and future underground LRT tunnels if required, to cross over the top of the station. The additional weight of backfill also helps reduce the impact of buoyancy caused by the high water table.

Both entrances are fully accessible and have large glazed windows above the entrance doors to capture light and allow it to penetrate down the vertical circulation elements to concourse and platform level. Passengers enter the northwest station entrance through doors at street level into an unpaid public area with views down through concourse level to the platform. Passengers from the York Region bus terminal enter the TTC facility by crossing Street “B” joining passengers from the on-street PPUDO. From here the concourse can be accessed by stair, elevator and up and down escalators.

The southeast entrance is an automatic entrance containing an automatic fareline with an Easier Access Pass Unit (EAPU), stairs, an up escalator and an elevator connected to the concourse level. Passengers from the TTC bus terminal paid area move to concourse level using stairs, up and down escalators and an elevator.

Concourse Level - Exhibit 6 – Concourse Level

The northwest concourse level contains the Collector’s Booth and associated fareline. Moving through the fareline leads to an elevator, stair, and up and down escalators to platform level. The southeast concourse level is fully fare paid and includes stairs, elevator and up and down escalators to the TTC bus terminal to allow free movement of TTC passengers.

The concourse levels also include TTC service equipment spaces as well as the emergency ventilation fans. Knockout panels are provided to accommodate connections to future developments.

Platform Level - Exhibit 7 – Platform Level

The subway platform level is served from the concourse level at both ends of the station by elevators, up and down escalators, and stairs. The light cone is centred over the platform providing an opening in the ceiling with a shaft that allows light to penetrate directly down to platform.

Artwork

A Public Art selection process resulted in the selection of the realities:united studio (Jan Edler artist) as the public artist for Steeles West Station. An art concept will be included in the second Public Open House for this project.

Project Impacts

This station sits under the municipal boundary dividing the City of Toronto and the City of Vaughan. The south half of the station will sit under York University lands. Negotiations are ongoing between York Region and United Parcel Services (UPS) to acquire land north of Steeles Avenue West. Construction will impact York University parking operations, the City of Toronto Track & Field Centre, and the UPS facilities. These key stakeholders have been, and will continue to be, included in ongoing discussions on construction staging management. Steeles West Station is also planned to be the site of the Tunnel Boring Machine (TBM) retrieval shaft for construction of the twin tunnels running northwest towards Highway 407 Station, and the launch shaft for tunnelling southeast towards York University Station.

To address the above impacts, the following steps are being advanced during design development:

- An Environmental Management Plan (EMP) 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.
- Mitigation strategies to address construction impact on operation of the adjacent properties will be further discussed with York University Development Corporation and UPS.

Cost and Schedule

The budget for construction of Steeles West Station is \$133 million. The estimated final cost of construction costs for Steeles West Station is \$145 million.

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

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

As design progresses, additional value engineering studies will be undertaken to reduce station costs. 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% in December 2009, with completion of design development to 100% in August 2010. Steeles West Station is scheduled for Substantial Completion in September 2014.

Next Steps

At an early date following Commission approval a Public Open House will be held. The design will then be developed leading to a second Public Open House in summer 2010. A report will also be submitted to the Commission for approval of finishes and artwork. A report is scheduled to be submitted for construction contract award approval in October 2010.

JUSTIFICATION

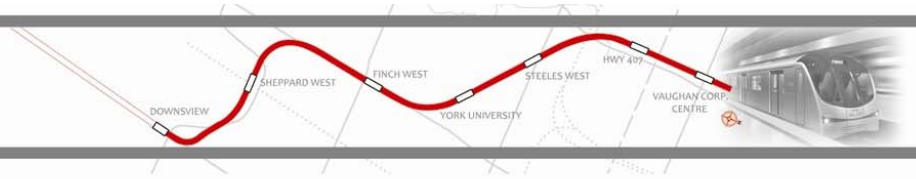
Approval is required to allow the station designers to progress their design and commence public meetings.

October 5, 2009
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Attachments Exhibits 1 to 7



Toronto-York Spadina
Subway Extension



Toronto-York Spadina Subway Extension

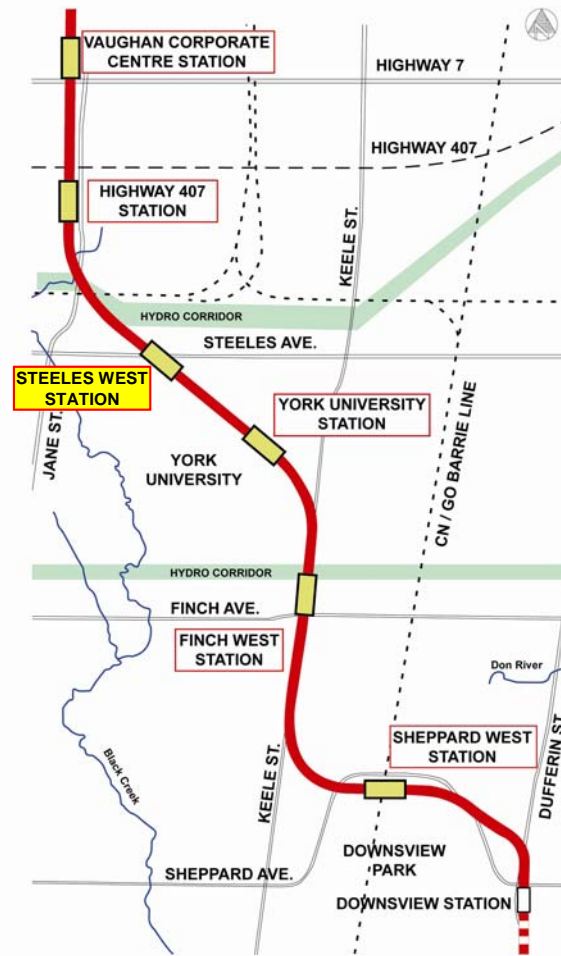


Exhibit 1 – TYSSE Map



Toronto-York Spadina
Subway Extension



Steeles West Station

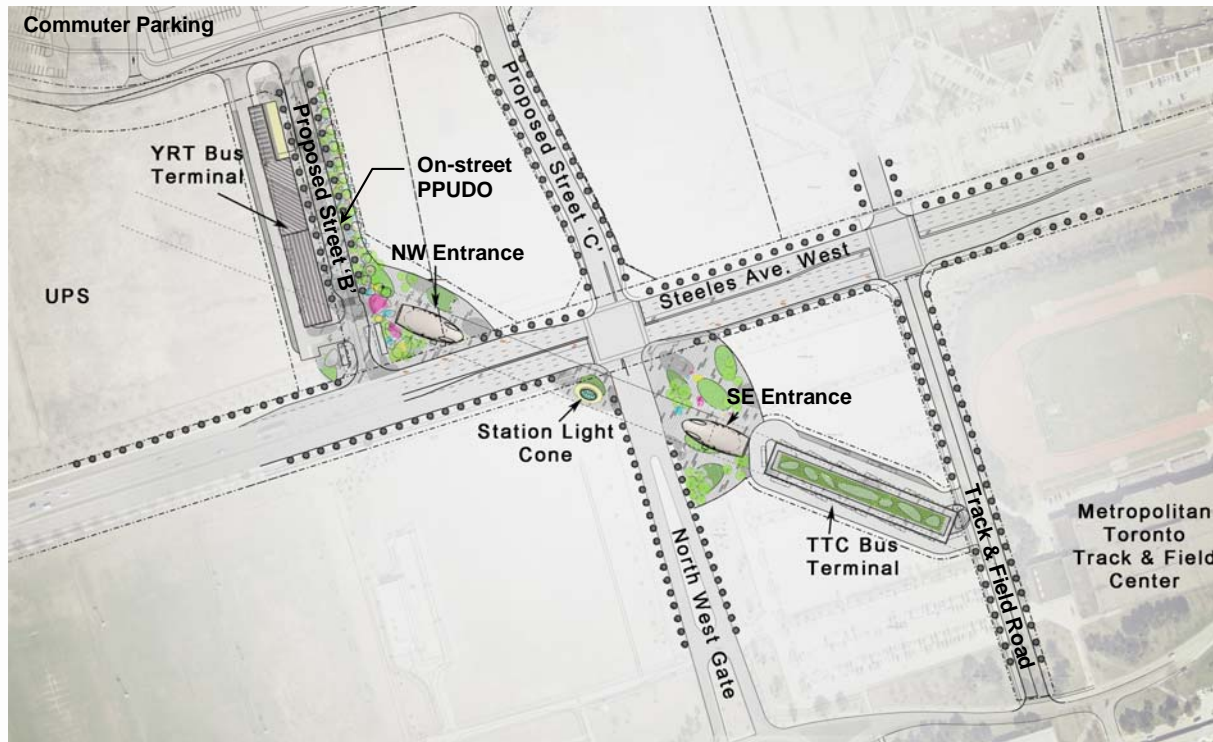


Exhibit 2 - Site plan



Toronto-York Spadina
Subway Extension



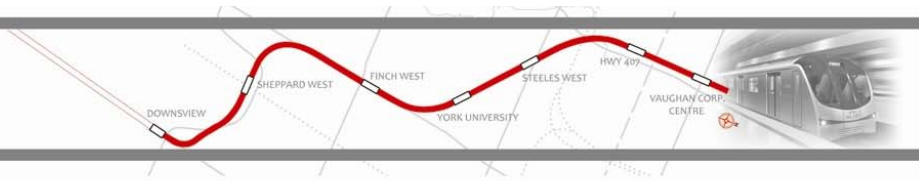
Steeles West Station



Exhibit 3 – Aerial View



Toronto-York Spadina
Subway Extension



Steeles West Station

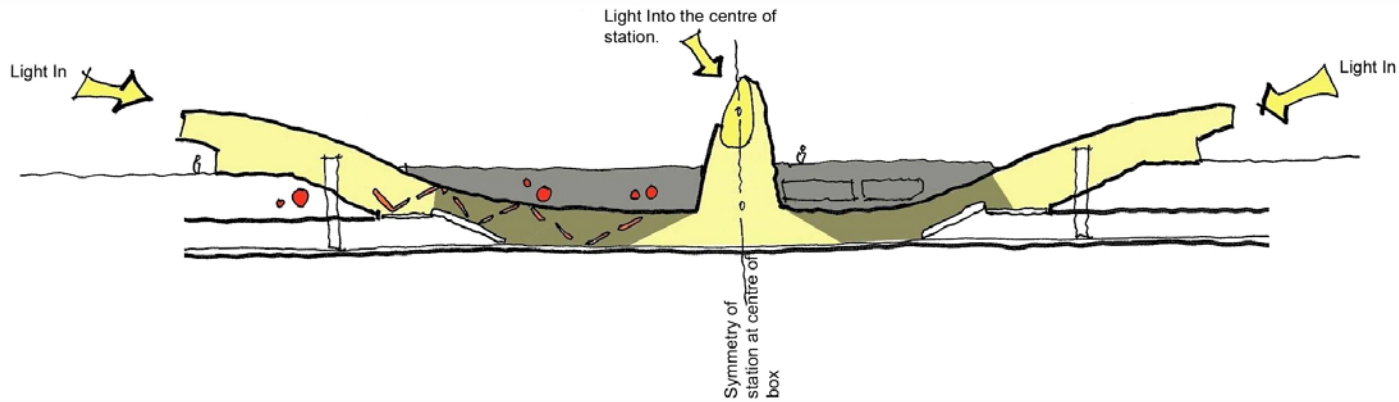
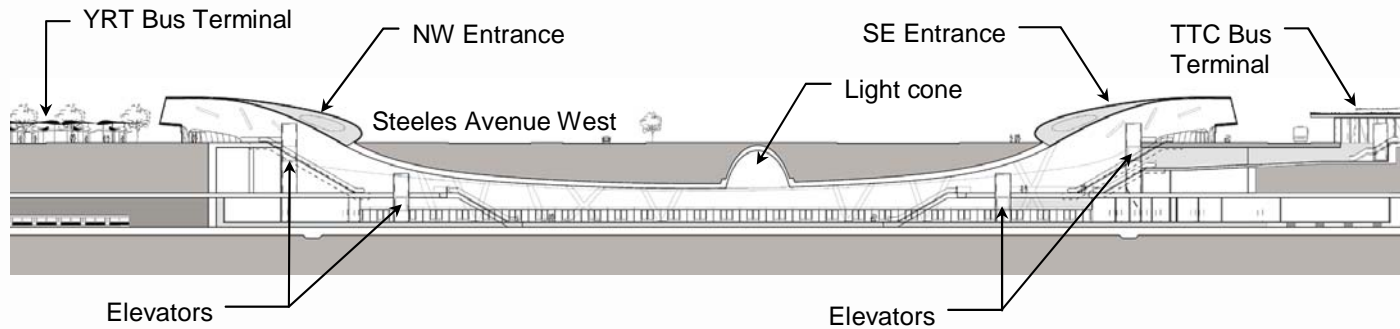
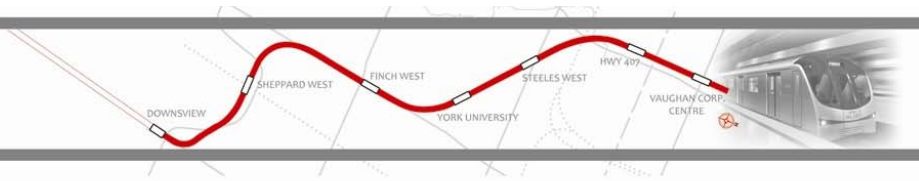


Exhibit 4 - Section



Steeles West Station

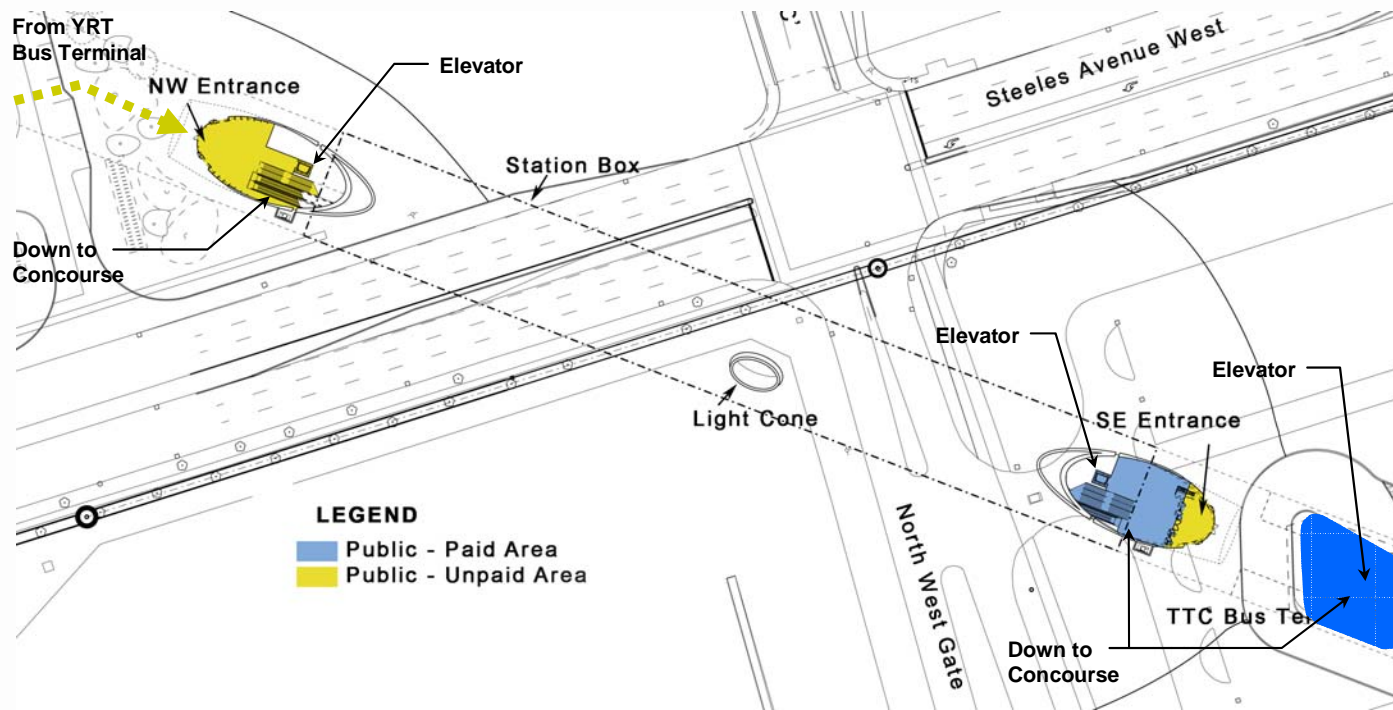


Exhibit 5 – Street Level



Toronto-York Spadina
Subway Extension



Steeles West Station

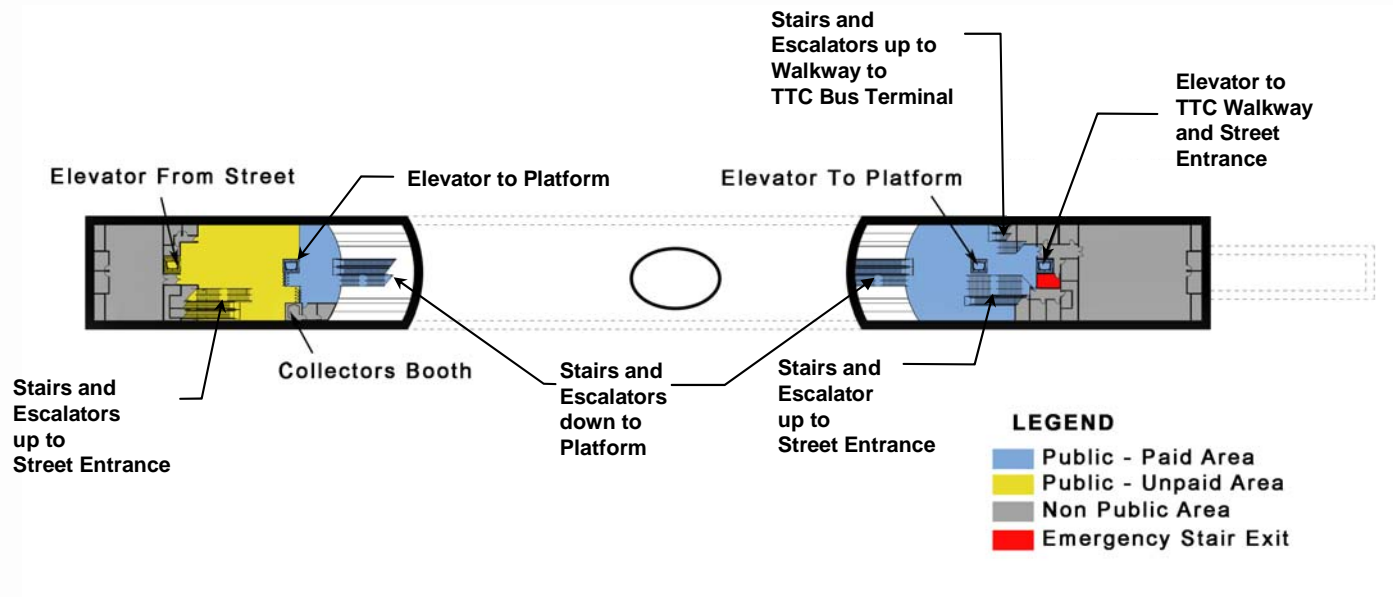


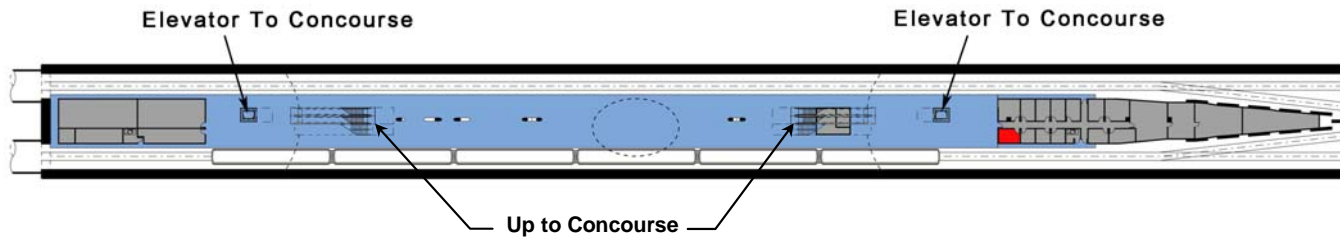
Exhibit 6 – Concourse Level



Toronto-York Spadina
Subway Extension



Steeles West Station



LEGEND

- Public - Paid Area
- Public - Unpaid Area
- Emergency Stair Exit

Exhibit 7 – Platform Level