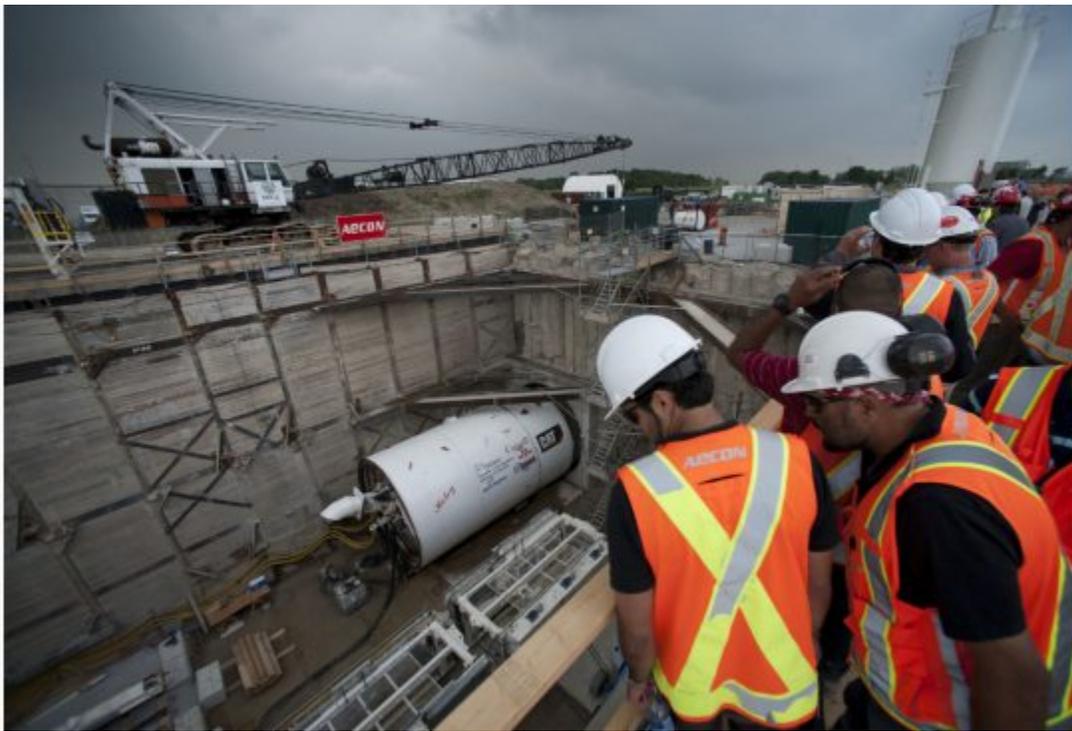


## Tough questions ahead on cost, design of Scarborough transit

While many councillors agree a new proposal for a joint subway-LRT, there are questions ahead about what gets built and how.



LUCAS OLENIUK / TORONTO STAR Order this photo

One cost-saving measure for the new subway line might be to go to a single, larger boring machine rather than the twin machines used, for example, on the Spadina subway extension, seen here.

**By:** Tess Kalinowski Transportation reporter, Jennifer Pagliaro City Hall reporter, Jan 21 2016

Many councillors agree a new joint subway-LRT proposal for Scarborough is an improvement over earlier east-end transit plans.

But even if they can make the tough decision to compromise and move ahead, questions remain about what gets built and how.

So what's at issue? Here's a look at the challenges ahead:

## One long tunnel



Keith Beaty

The tunnel near the Sheppard West station for the Spadina subway extension. At six kilometres, the tunnel between Kennedy Station and Scarborough City Centre would be the longest section on the TTC.

At six kilometres, the tunnel between Kennedy Station and Scarborough City Centre would be the longest section on the TTC. Right now, that distinction goes to the 2.5-kilometre tunnel between St. Clair West and Eglinton West stations. Longer tunnels aren't necessarily dangerous. After all, the Channel tunnel between England and France is more than 50 kilometres, much of it under water. But a longer tunnel has higher ventilation requirements that can cost tens of millions of dollars.

## The big dig



Victor Biro

Two boring machines were used for the Spadina subway extension. The higher cost of a large single borer can be offset by savings from not having to dig down to build stations, according to a transit expert, who did not want to be named.

One potential money-saving technique likely to be considered would be using a single borer instead of the twin machines used on the Spadina subway extension and Eglinton Crosstown line. Single boring technology, used in Barcelona, creates a tunnel wide enough for two tracks and the platforms. The higher cost of a large single borer can be offset by savings from not having to dig down to build stations, according to a transit expert, who did not want to be named.

That may seem less important if the city creates a single-stop subway rather than three stations. The same expert, however, said it would be foolish not to project for future stations. To go back later to build a station in the middle of the line would require breaking the tunnel, disrupting service and risking its integrity.

The four giant boring machines used on the Eglinton Crosstown cost \$54 million.

## **Ridership**



Lucas Oleniuk

Ridership projections of the latest proposals aren't available yet, and they won't be ready for council when it votes on the new plan.

Ridership projections for the latest proposal aren't yet available, and chief planner Jennifer Keesmaat confirmed those numbers will not be ready for council when it first votes on the new plan. The same was true when council first voted to back the three-stop subway, a decision now said to be lacking planning rationale.

Questionable ridership numbers were used then to justify switching from the planned seven-stop LRT to a three-stop subway. City planners will forecast ridership using the city's new computer modeling tool, which takes into account factors such as population density and the overall transit network. Forecasting isn't science, says Keesmaat, because it depends on what assumptions are plugged into the model.

Senior transportation planner David Crowley says transit decisions are too dependent on those forecasts. “Modelling and demand forecasting isn’t planning. It’s an input to planning,” he said.

The latest Scarborough proposal isn’t any better than the previous version when it comes to providing transit where it’s most needed, he said. A relief line running from Sheppard and Don Mills, intersecting with the east end of the Danforth subway and into the downtown around Queen St., is a better option, he said.

As long as 48 per cent of Scarborough trips don’t leave the boundaries of Scarborough, ridership will never justify the \$3.56-billion cost.

“For what they’re planning to do, you could do five times more by extending the bus service, particularly to south York Region, where Scarborough residents increasingly work,” he said.

### **Trains on track**



Marcus Oleniuk

If every train on the Bloor-Danforth line travels all the way east to the Scarborough City Centre, the TTC will need to buy more trains, or force riders to wait longer between them.

Service delivery will be affected by the plan. If every train on the Bloor-Danforth line travels all the way east to the Scarborough City Centre, the TTC will need to buy more trains, or force riders to wait longer between them. One possibility is to run only every second or third train to the end, turning the rest back at Kennedy Station.

Running all trains end-to-end would eliminate the need to build an expensive tail track at Kennedy, but more trains would be needed to maintain the same frequency of service.

## Above ground vs. underground



Marcus Oleniuk

TTC chair Councillor Josh Colle plans to ask staff to study the engineering questions involved, having to do with track elevation, degree of turns and how much tunnelling would still be required.

Though Mayor John Tory and his supporters are committed to building a subway to Scarborough City Centre as pledged during his campaign, there are questions about the potential savings that could come from running it above-ground through Scarborough, in its own right of way.

TTC chair Councillor Josh Colle plans to ask staff to study the engineering questions involved, having to do with track elevation, degree of turns and how much tunnelling would still be required, depending on the alignment.

“At the end of the day, you want that express subway service to the city centre. I don’t think people care how it gets there,” he said.

Keesmaat said she didn’t dig into such options when she developed the proposal now before executive committee, but said she’d “welcome” looking at those questions.

Tory said he is “willing to discuss anything that is going to give better transit to the people of Scarborough on a cost-effective basis, in as short a period of time as possible.”

## A subway for an LRT's job?



Some councillors have argued that an LRT might be better suited for transit to Scarborough City Centre.

Others, like Councillor Gord Perks, question the necessity of a subway at all to get to Scarborough City Centre, saying a one-stop subway that long amounts to commuter rail at a much higher cost.

“At \$2 billion, we have to ask ourselves: Is that the right investment? I don’t think it is,” he said, pointing out that that amount would be enough to basically wipe out a 10-year repair backlog at Toronto Community Housing. He argued that any honest discussion of the best technology for that route would not support a subway.

Tory is refusing to even consider an LRT, saying he’d promised not to reopen that debate. With mounting criticism of the old three-stop subway plan, Tory admitted Thursday there was a real possibility council would have again overturned its own decision on Scarborough transit, scrapping the subway after earlier ditching a fully-funded, seven-stop LRT. Tory argued that kind of indecision risked putting investment from the provincial and federal governments in jeopardy.