

The Ontario Line

Pape-Riverdale Open House

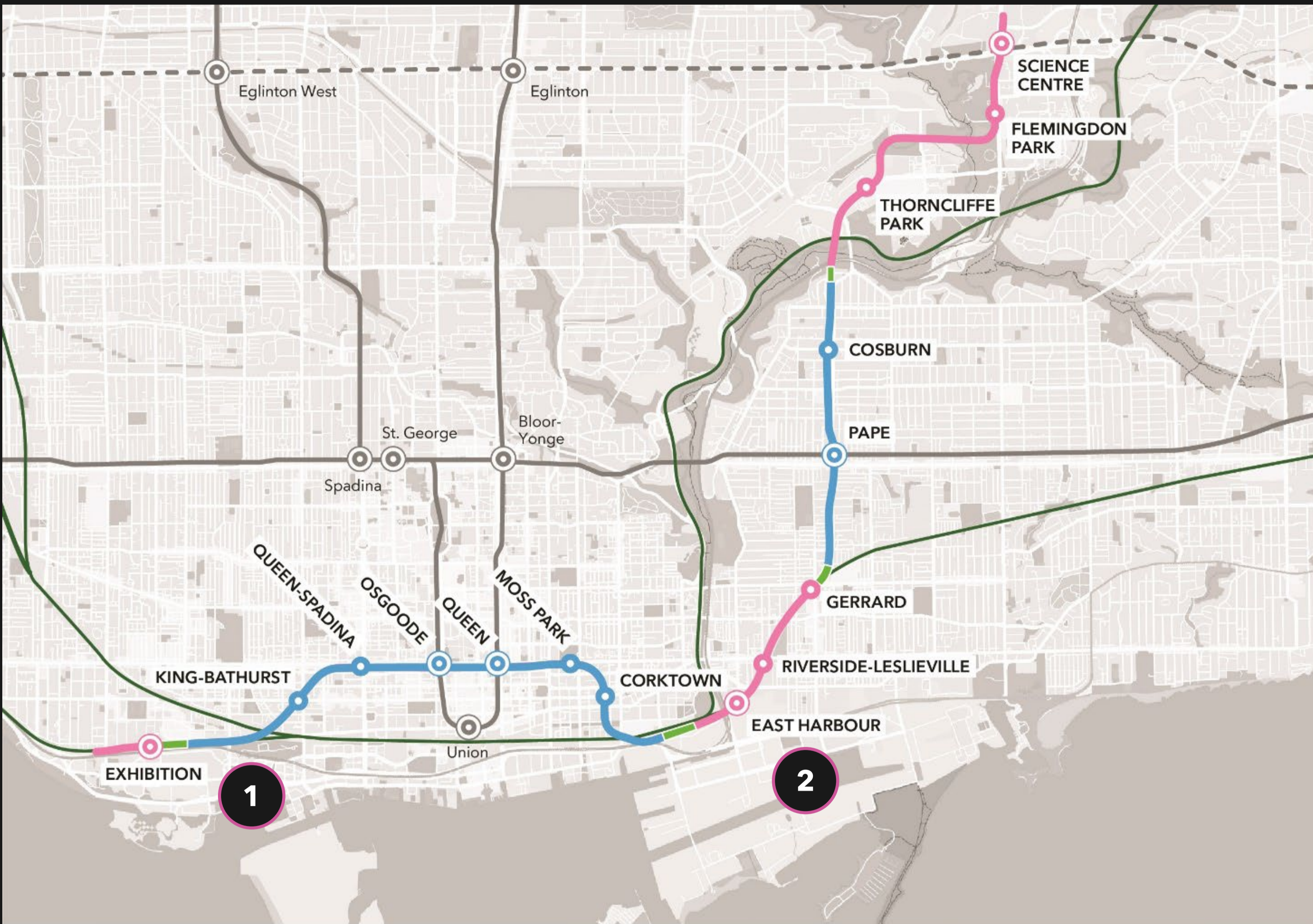
May 28, 2024

Pape Avenue Junior Public School

 METROLINX



Ontario Line Subway



— At Grade / Elevated
 Station
 — Existing GO Rail
 - - - Future Line 5 Eglinton
— Tunnelled
 Interchange Station
■ Tunnel Portal
— Existing Subway

1 South Alignment of Ontario Line
 (Exhibition to Corktown/
 Don Yard)

2 North Alignment of Ontario Line
 (East Harbour to Science Centre)



15.6 kilometres long



15 stations



As frequent as every 90 seconds during rush hour



227,500 more people within walking distance to transit



388,000 daily boardings



40+ connections to other transit options



Up to 47,000 more jobs accessible in 45 minutes or less, on average



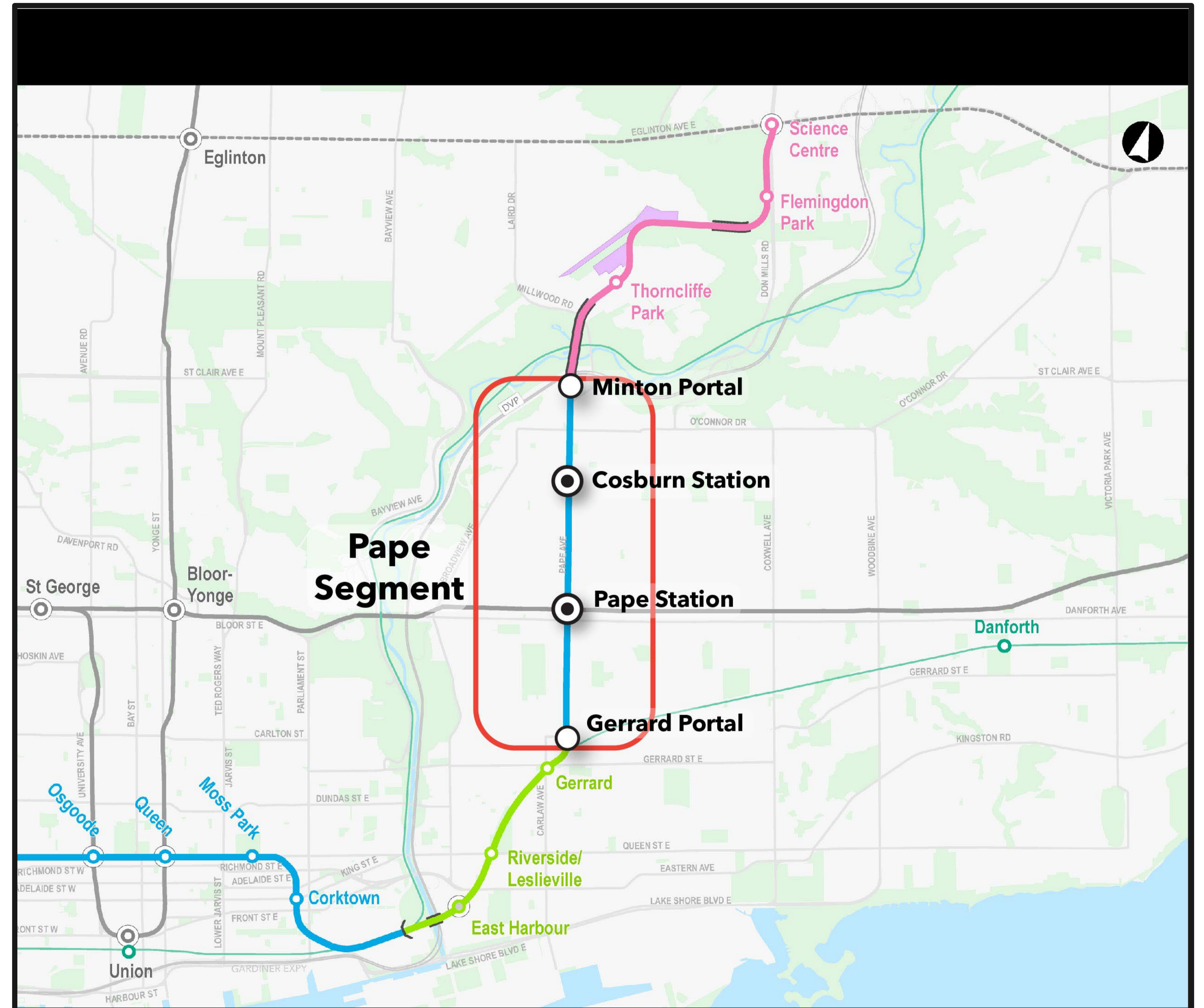
28,000 fewer cars off the road each day

Pape Segment Overview

The Pape Segment of the Ontario Line consists of:

- two underground stations (Pape Station and Cosburn Station)
- two portals which will allow trains to transfer from twin underground tunnels to surface-level or elevated segments, and;
- two emergency exit buildings (at Bain Avenue and Sammon Avenue).

At the south end of the Pape Segment, the Gerrard Tunnel Portal will be the transfer point between the rail corridor surface segment and the underground Pape Avenue tunnels.



Advance Utilities

Prior to major subway construction, many private utilities need to be moved out of the way. Work has been underway since 2023 to move these utilities, which include gas lines, electrical lines, and telecommunications cables away from Pape Avenue in areas where they may conflict with tunnel construction.

Constructor: *Various Utility Contractors*

Timeline: 2023-2024



Sewer Relocations

The largest utility relocations in the area involve constructing a new combined sewer, water line, and storm sewer and removing the old storm sewer from underneath Pape south of Riverdale. Work includes micro-tunnelling the new storm sewer under the eastern edge of the Pape Avenue Junior Public School yard as well as sewer and waterline work on Pape Avenue.

Constructor: Clearway Construction

Timeline: 2024-2025



Example: Micro-tunnel under active rail line (Ontario Line work)

Portal, Tunnels & Stations

The Pape Tunnel and Underground Station (PTUS) constructor will build the Gerrard Portal, the Pape tunnel and two underground stations. Adjacent to the Gerrard Portal, the Elevated Guideway and Stations (EGS) constructor will build Gerrard Station.

PTUS Constructor - Pape North Connects

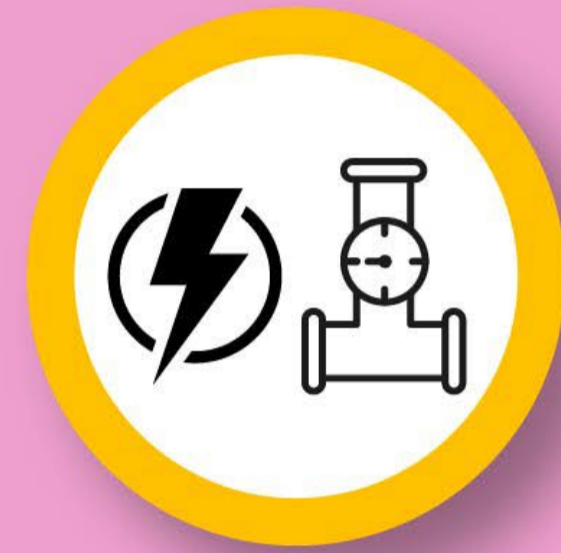
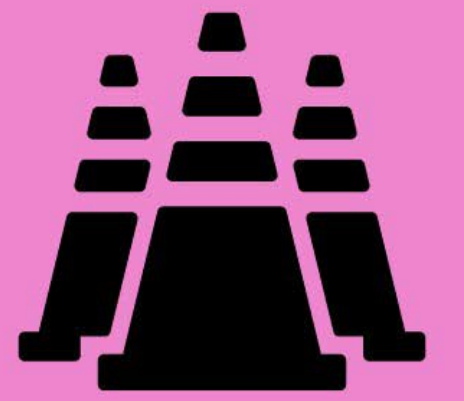
EGS Constructor - Trillium Guideway Partners

Timeline: 2024-2031



Example: Toronto-York Spadina Subway Extension (TYSSE) Tunnel.

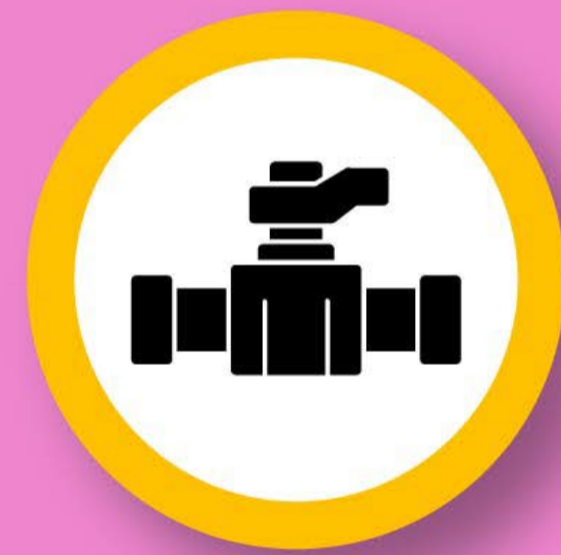
Gerrard Portal Preparatory Works



Dry Utilities + Gas Mains

Various utilities in the path of future infrastructure must be moved before construction begins. These include:

- **Bell lines:** manhole and lines installed on north side of Pape-Langley intersection (complete)
- **Rogers lines:** conduits installed in laneway east of Pape Avenue (ongoing)
- **Enbridge Gas mains:** gas line installed on northeast corner of Pape & Riverdale intersection (complete)
- **Toronto Hydro infrastructure:** new chambers at Pape & Riverdale and 449 Carlaw plaza entrance, duct bank on east side of Pape between Riverdale and plaza entrance (ongoing)
- **Cable pulling:** Rogers, Bell, and Toronto Hydro pulling cables into new duct banks (upcoming).



Wet Utilities

Relocation of the existing sewer out from under Pape Avenue between the 449 Carlaw plaza entrance and Riverdale Avenue. Sewer will be replaced by a new storm sewer constructed by micro-tunnel along the eastern edge of the Pape Avenue Junior Public School yard, and by a combined sewer built via open trench work on Pape Avenue. Work is expected to begin in September 2024.



Demolitions

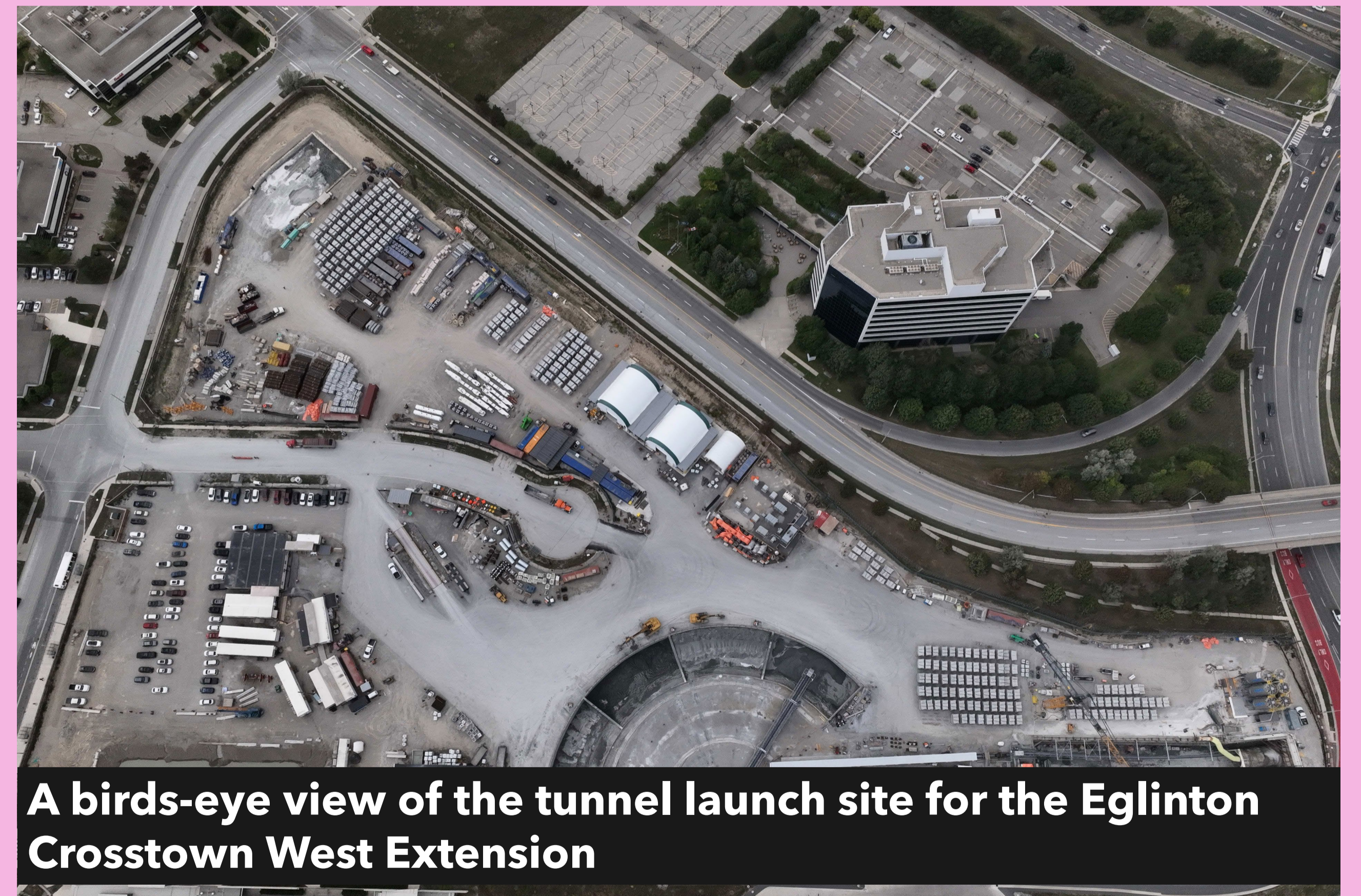
Buildings within the former 449 Carlaw plaza will be demolished, along with vacant houses at 388-402 Pape Avenue. These buildings need to be removed to make space for portal and tunnel construction. Demolition is expected to take place later in 2024.

Gerrard Tunnel Portal

- The Gerard Tunnel Portal will act as an entry and exit point for the Ontario Line moving from the joint GO train corridor to the underground tunnels. It will be located at 449 Carlaw Avenue between Carlaw Avenue and Pape Avenue just west of the GO tracks.
- It is also where the two Tunnel Boring Machines (TBMs) begin their digging journey. The two TBMs will dig almost three kilometres before they are extracted at the Minton Portal, just north of Minton Place near the Don Valley Parkway.

What is a portal?

A portal is an entrance into underground tunnels that trains go through to transition between the underground section and the surface or above ground section.



A birds-eye view of the tunnel launch site for the Eglinton Crosstown West Extension

Sequencing – Gerrard Portal



1 Demolition (449 Carlaw plaza and 388-402 Pape Ave)



Waterloo LRT underground utility replacement.

2 Underground utilities relocated (hydro, Rogers/ Bell, water, storm and sanitary sewer)



Scarborough Subway Extension Piling Work.

3 Drilling piles to support excavation



Concrete slab on Toronto-York Spadina Subway Extension (TYSSE).

4 Excavation of the portal footprint and installation of a concrete slab to act as a cradle for the TBM



Auxiliary installations YYSSE

5 Construction of auxiliary facilities to support the installation of the TBM

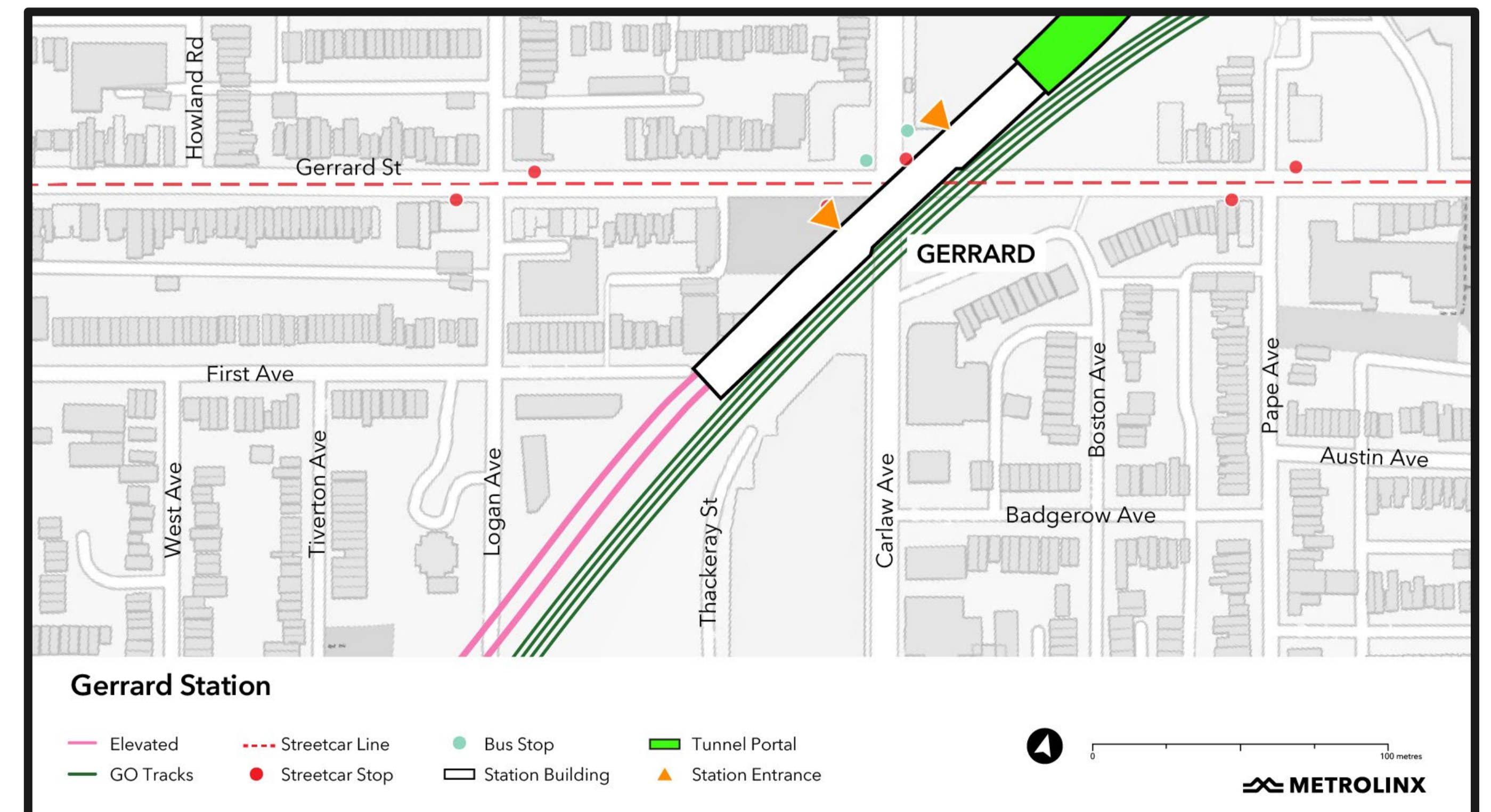


Lowering TBM cutterhead at YYSSE.

6 Tunnel boring machine (TBM) installation and launch

Gerrard Station

- Gerrard Station will be an elevated station located at Carlaw Avenue and Gerrard Street. It will sit overtop the intersection and will span from First Avenue into the 449 Carlaw plaza.
- An estimated 3,300 people will use the station during the busiest travel hour, including 2,000 transferring from local streetcars and buses.
- The station will be constructed as part of the Elevated Guideway and Stations contractor's work.



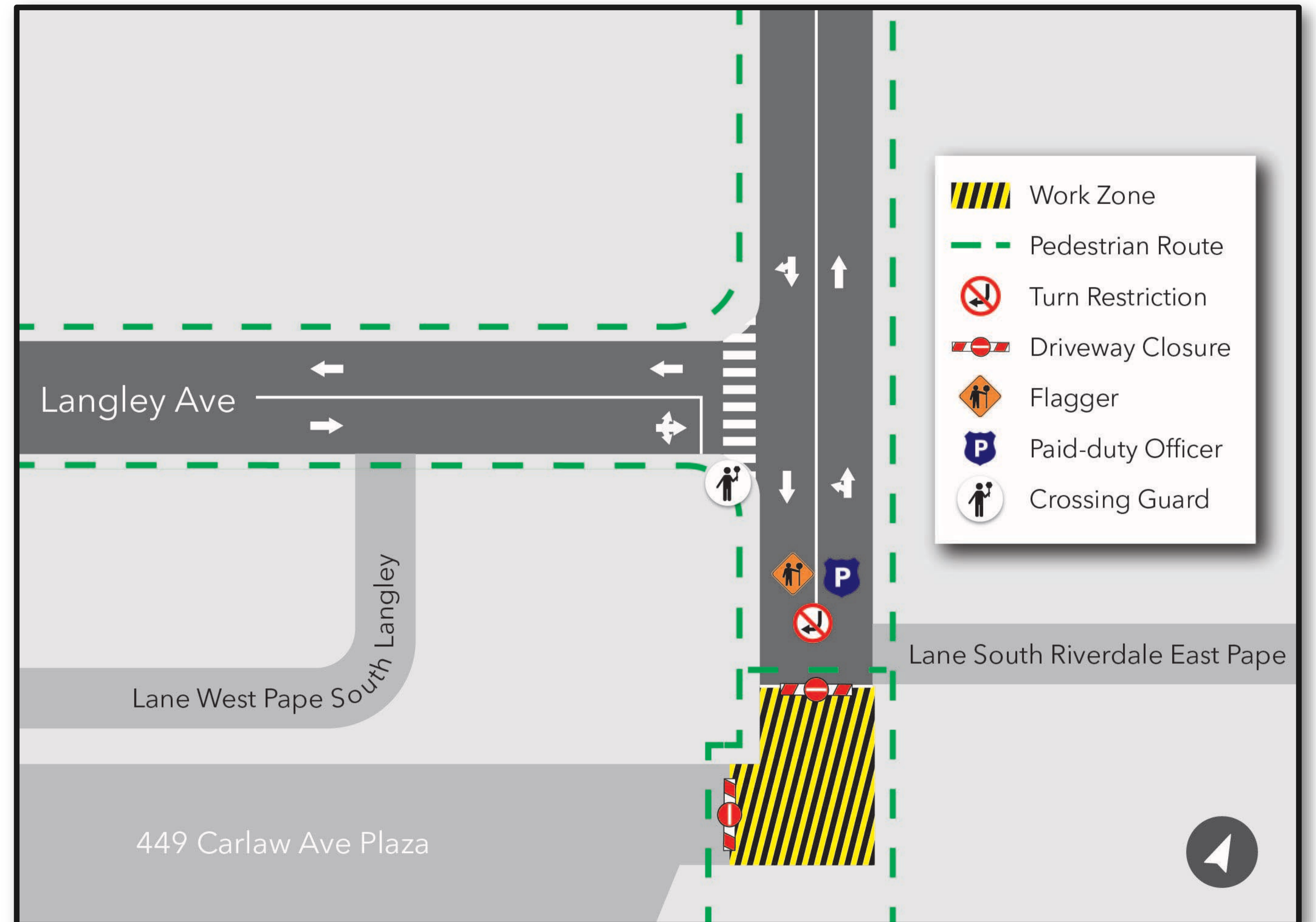
Gerrard-Carlaw South Transit Oriented Community

- Infrastructure Ontario is managing the proposed Transit Oriented Community south of the future Gerrard Station. This proposal includes approximately 1,300 residential units.
- For more information, visit: engageio.ca/en/GerrardCarlawSouth or scan the QR code below:



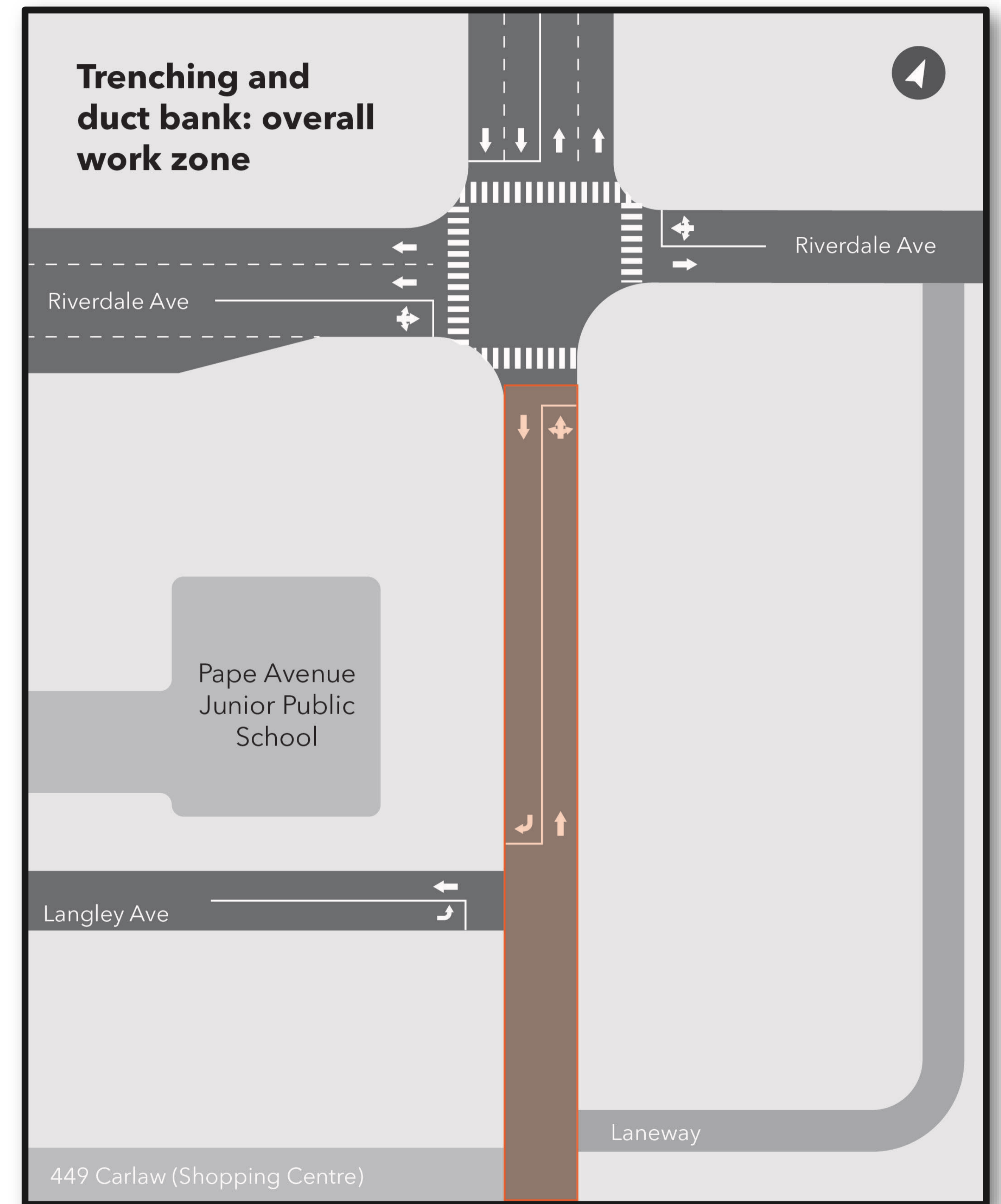
Ongoing Work - Toronto Hydro Chamber Construction

- On April 29, Toronto Hydro began construction of the south chamber on the driveway to the 449 Carlaw plaza.
- A hydro chamber is an underground compartment located below street level that houses infrastructure and monitors relevant to local electric power distribution.
- Work will be complete by the end of June.
- This work is similar to the chamber work completed at Pape Avenue and Riverdale Avenue earlier this year.



Upcoming Work - Toronto Hydro Trenching and Duct Bank Installation

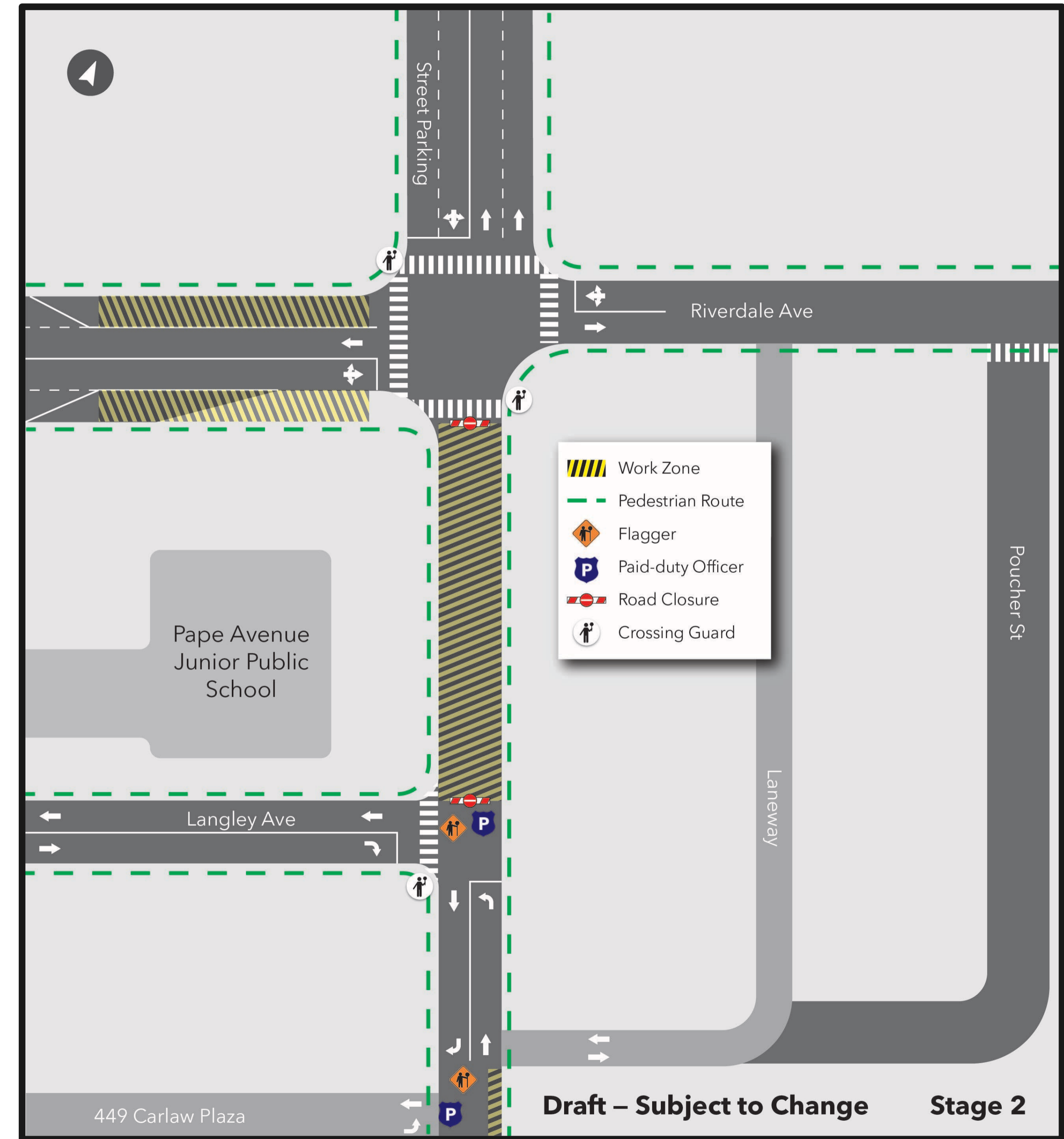
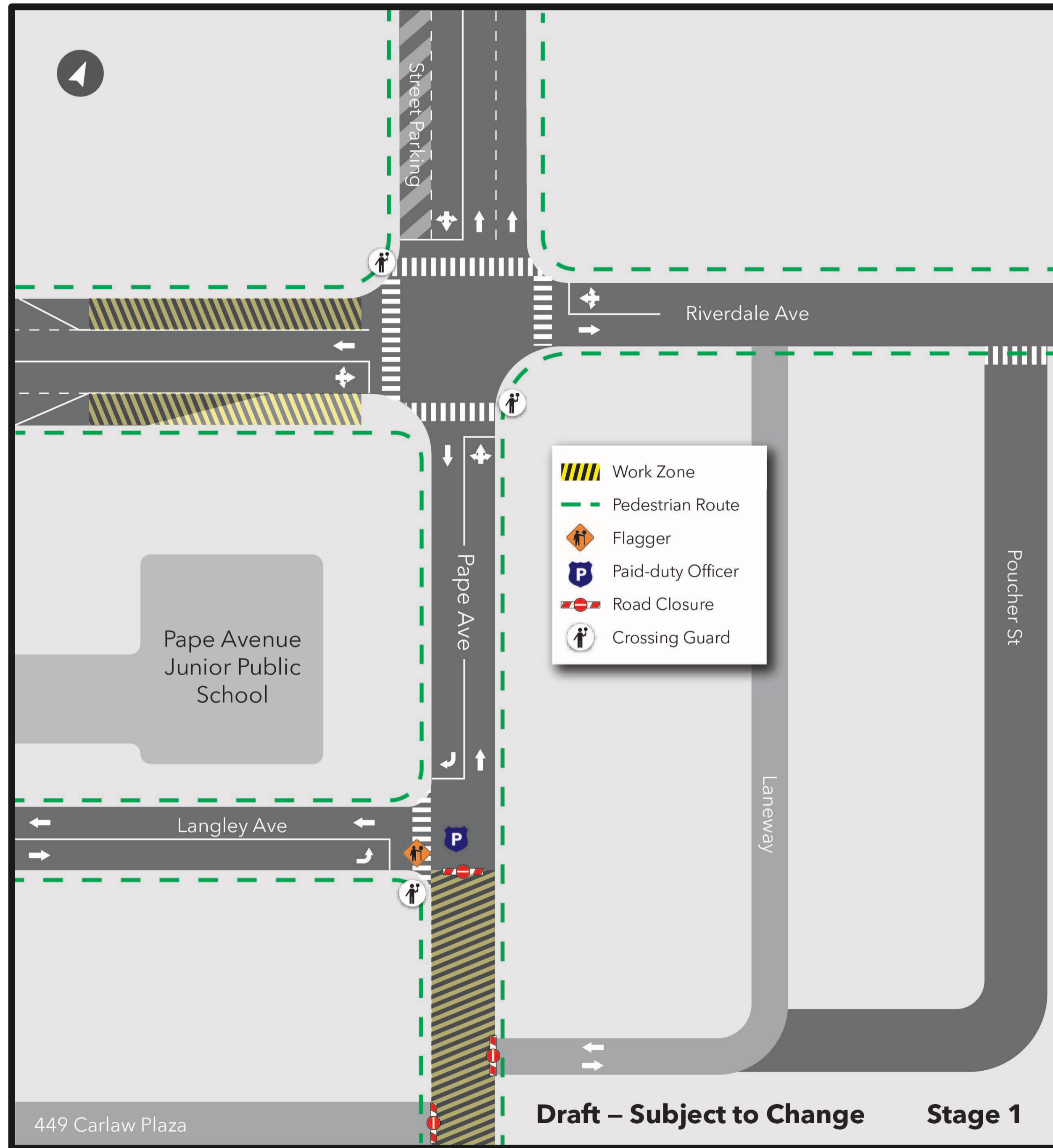
- Toronto Hydro will carry out trenching and excavation to install a new duct bank on Pape Avenue this summer, connecting the newly constructed chambers at Riverdale Avenue and at Langley Avenue.
- Due to unanticipated ground conditions discovered during bypass installation, Toronto Hydro, the City and Metrolinx have worked together to create revised staging plans. These plans will involve road closures on Pape Avenue which will happen over the summer.
- As with previous stages, paid-duty officers, crossing guards, and traffic controllers will be present.
- This work will take approximately six weeks, split into two stages.
- Trenching and duct bank installation will not begin until the 2023-2024 school year concludes.



Upcoming Work - Toronto Hydro Trenching and Duct Bank Installation

Stage 1

Stage 2



Upcoming Work - Rogers Relocations

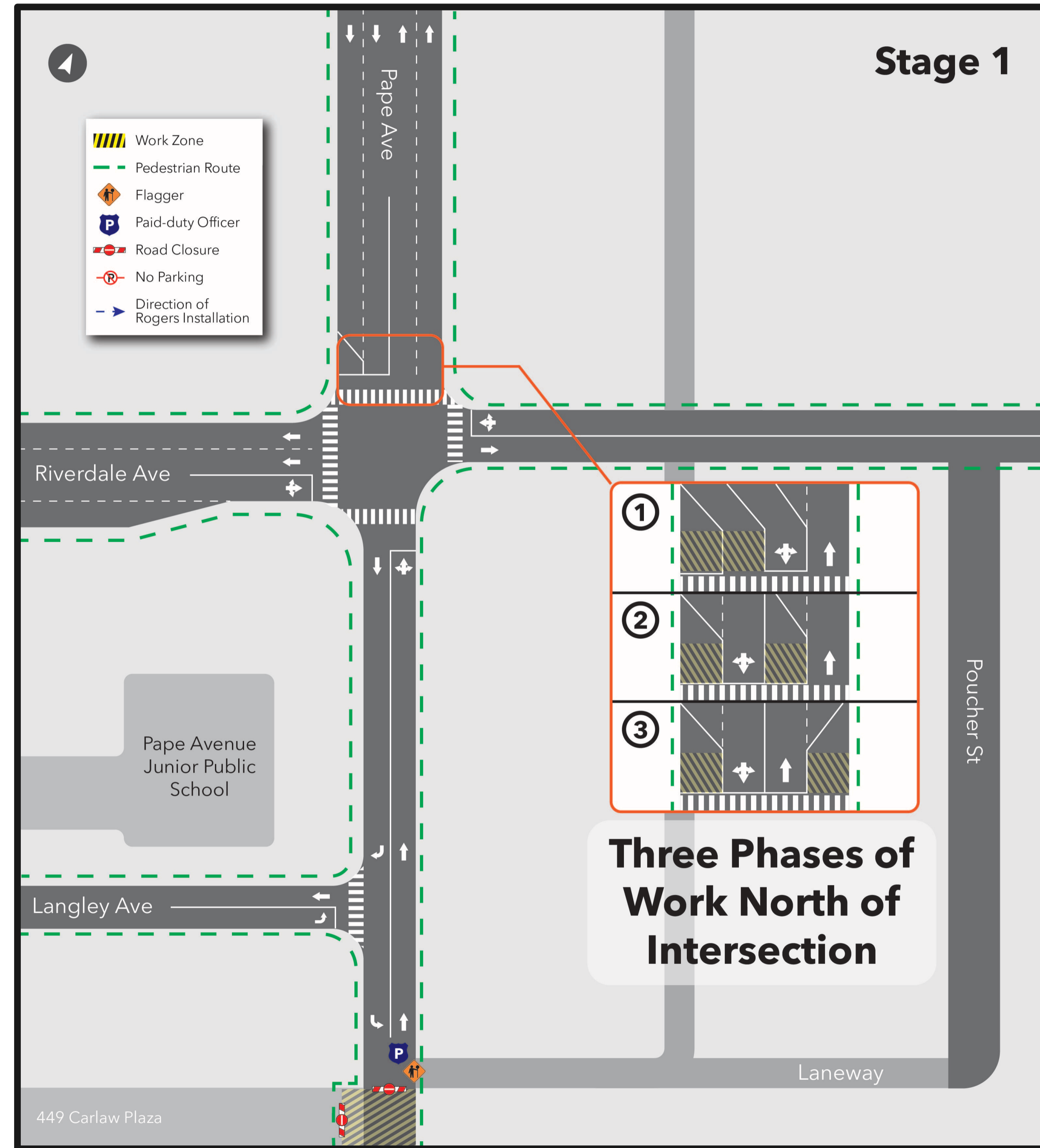
- Rogers and its subcontractor, Cybertec, will be relocating its telecommunications lines under Pape Avenue starting June 3 for approximately five weeks.
- This work will involve installing new cables under the road surface in the laneway east of Pape Avenue between Langley Avenue and Riverdale Avenue using a directional drill.
- The first two stages of this work will take place concurrently with Toronto Hydro's chamber construction works at the 449 Carlaw plaza driveway.



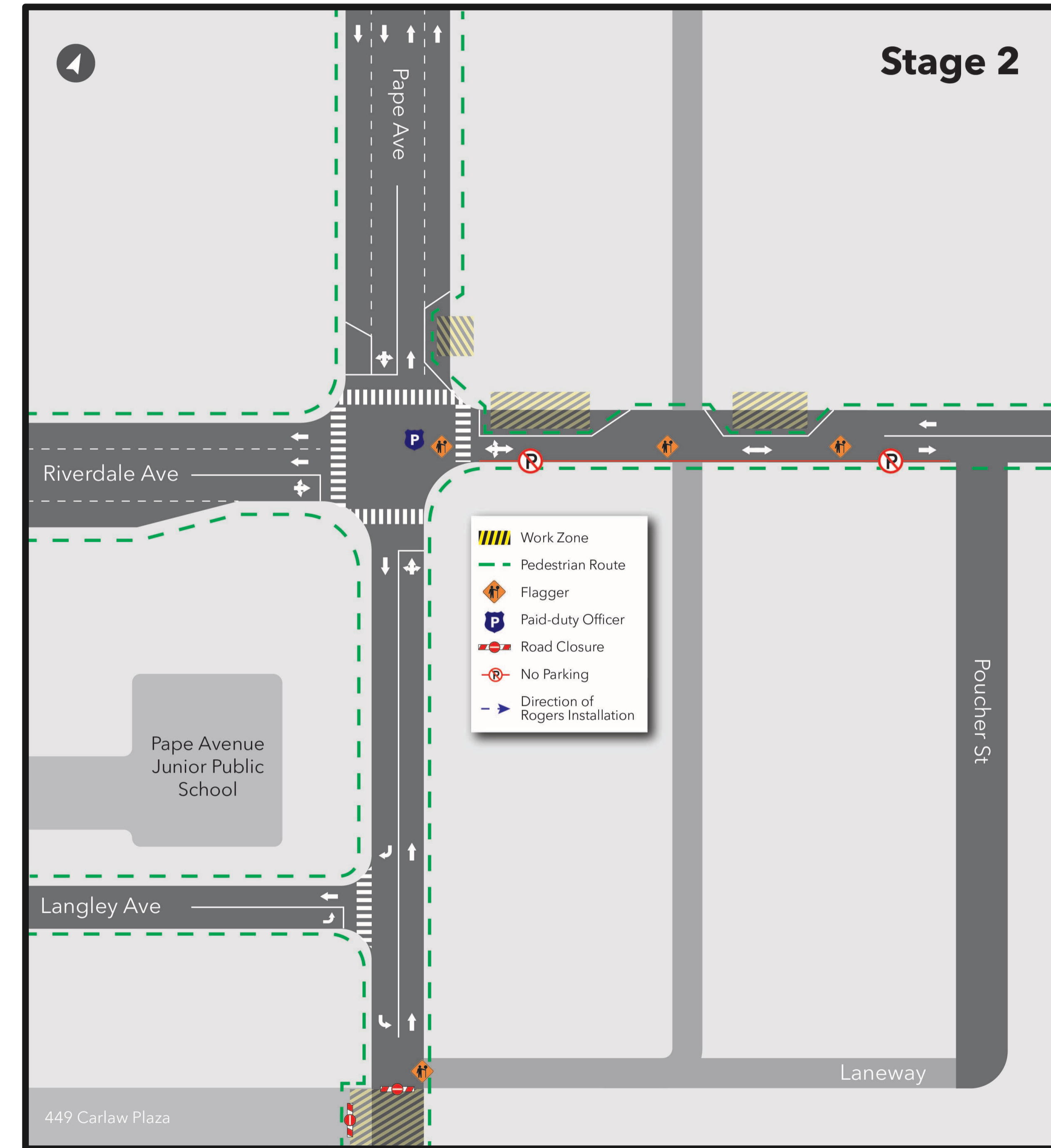
Directional drilling will be used to install cables under the laneway while minimizing disturbance to the surface (stock photo).

Upcoming Work - Rogers Relocations

Stage 1 - 1 week duration

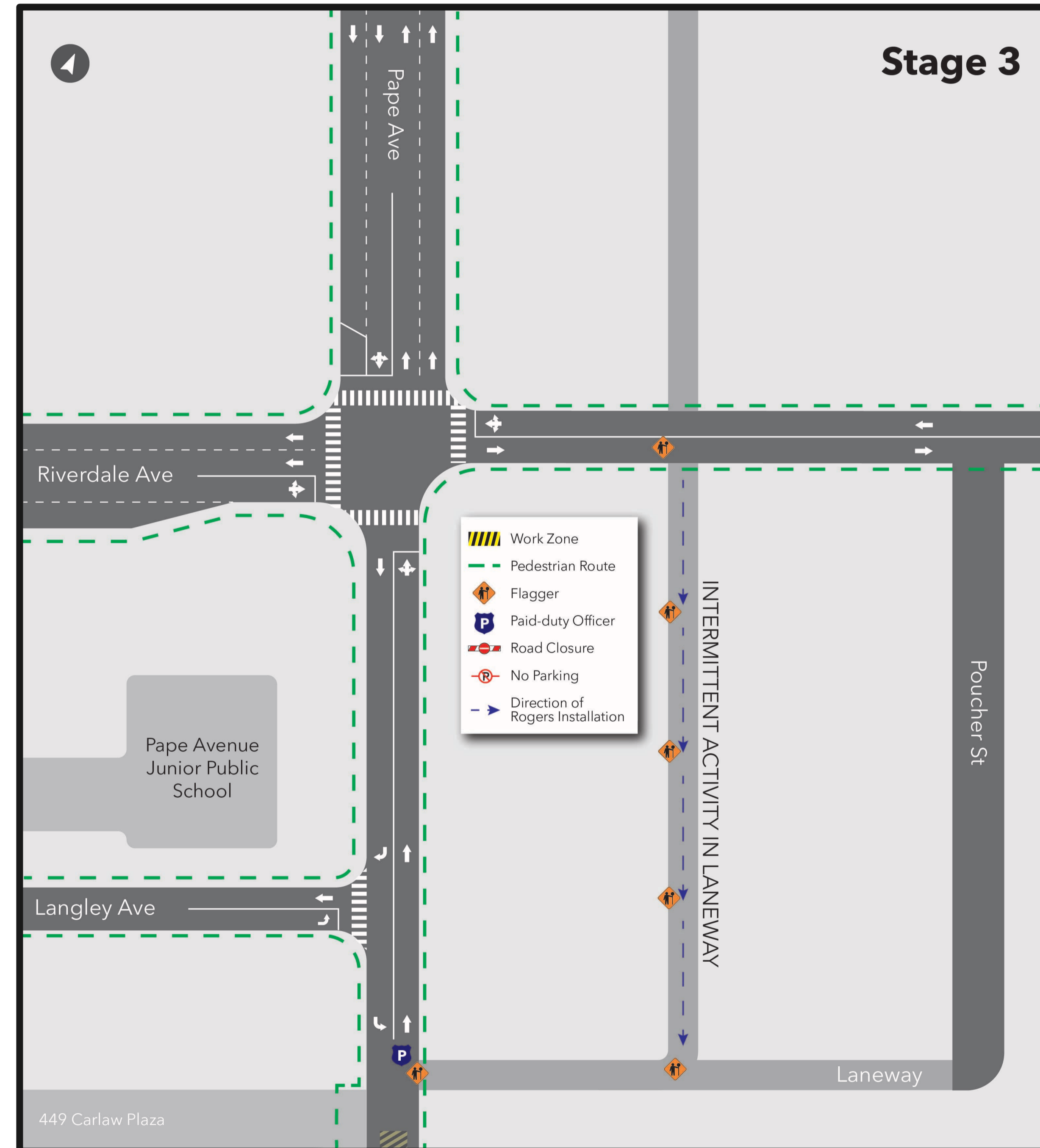


Stage 2 - 1 week duration

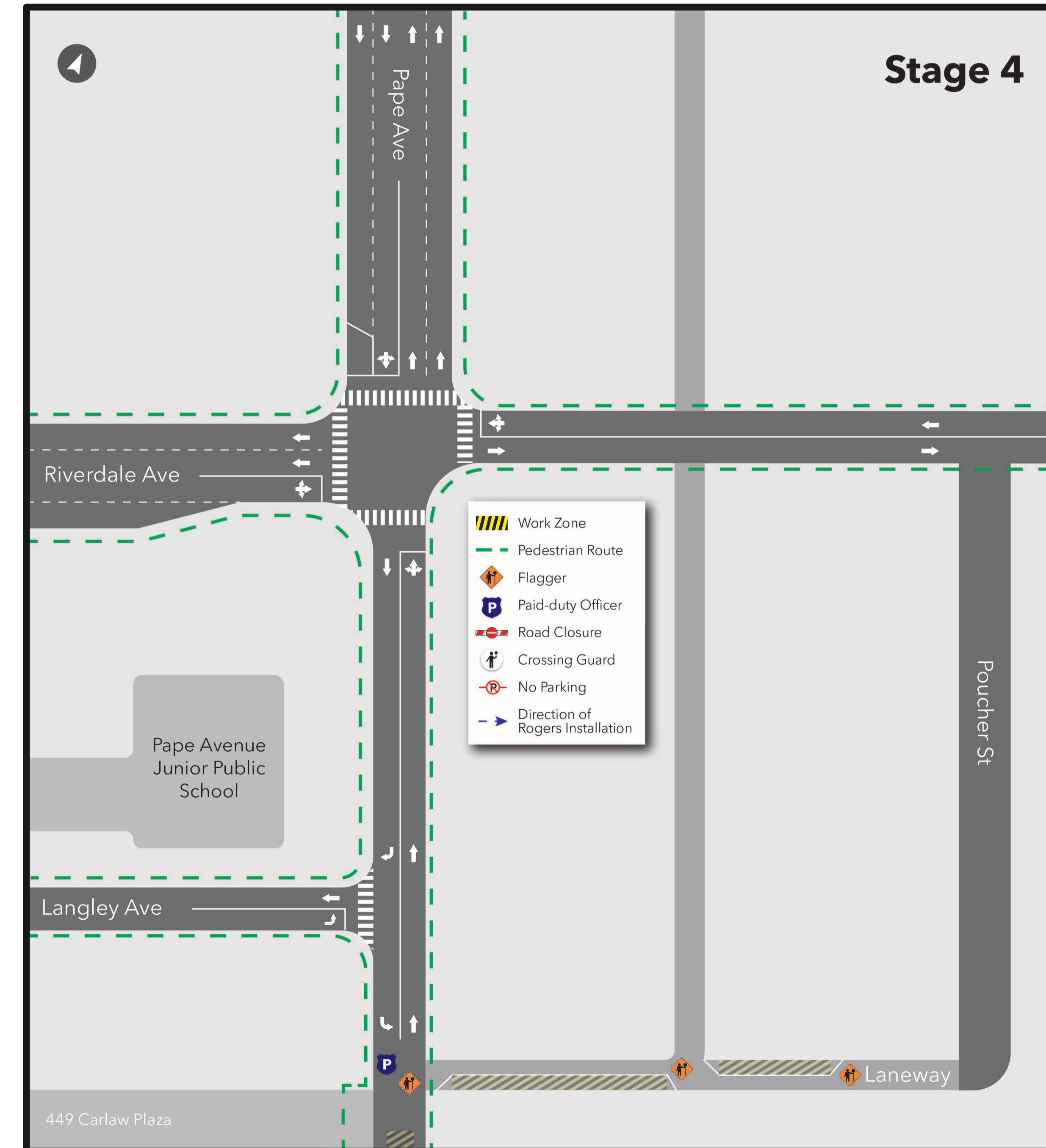


Upcoming Work - Rogers Relocations

Stage 3 - 1 week duration

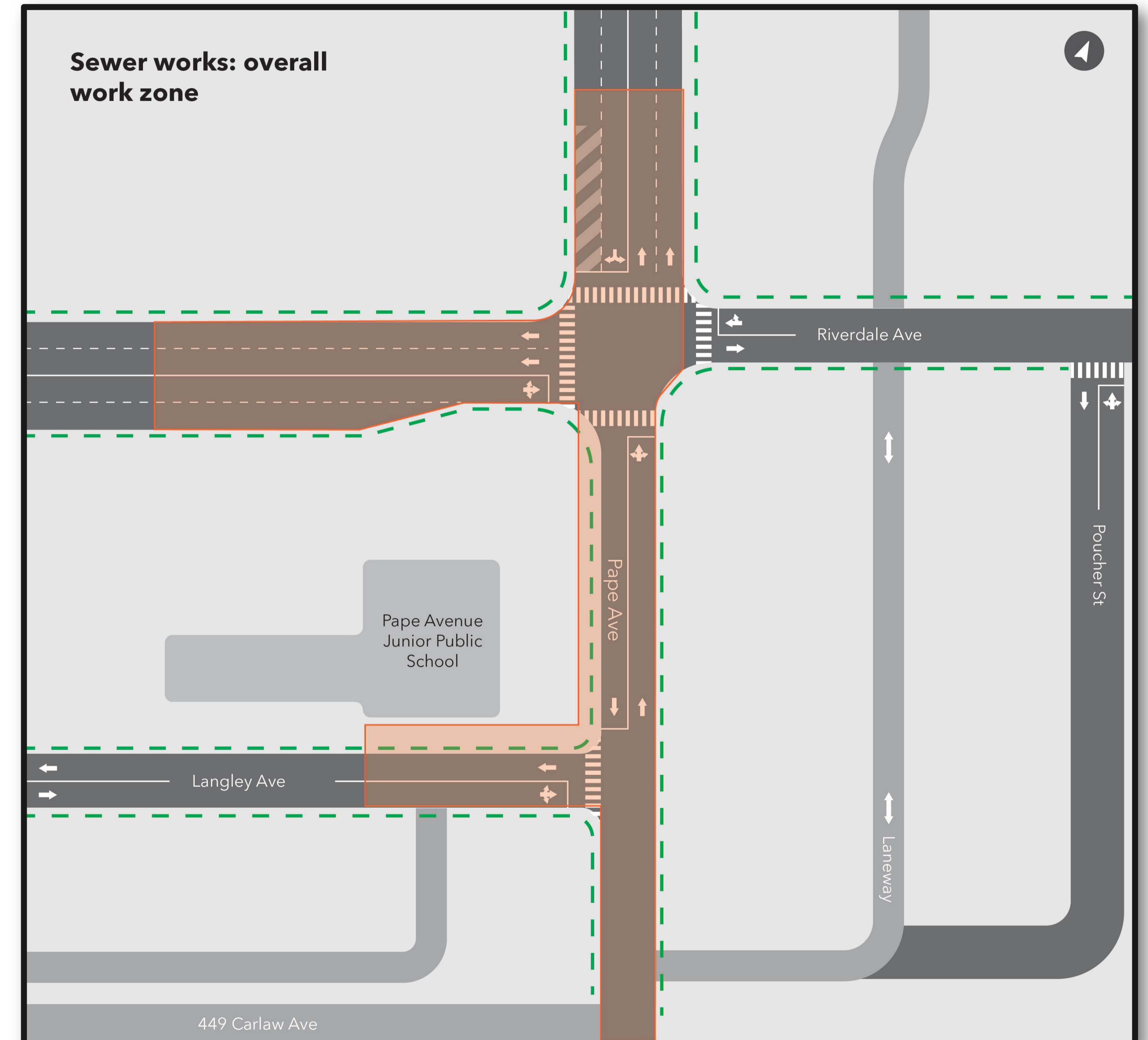


Stage 3 - 2 week duration



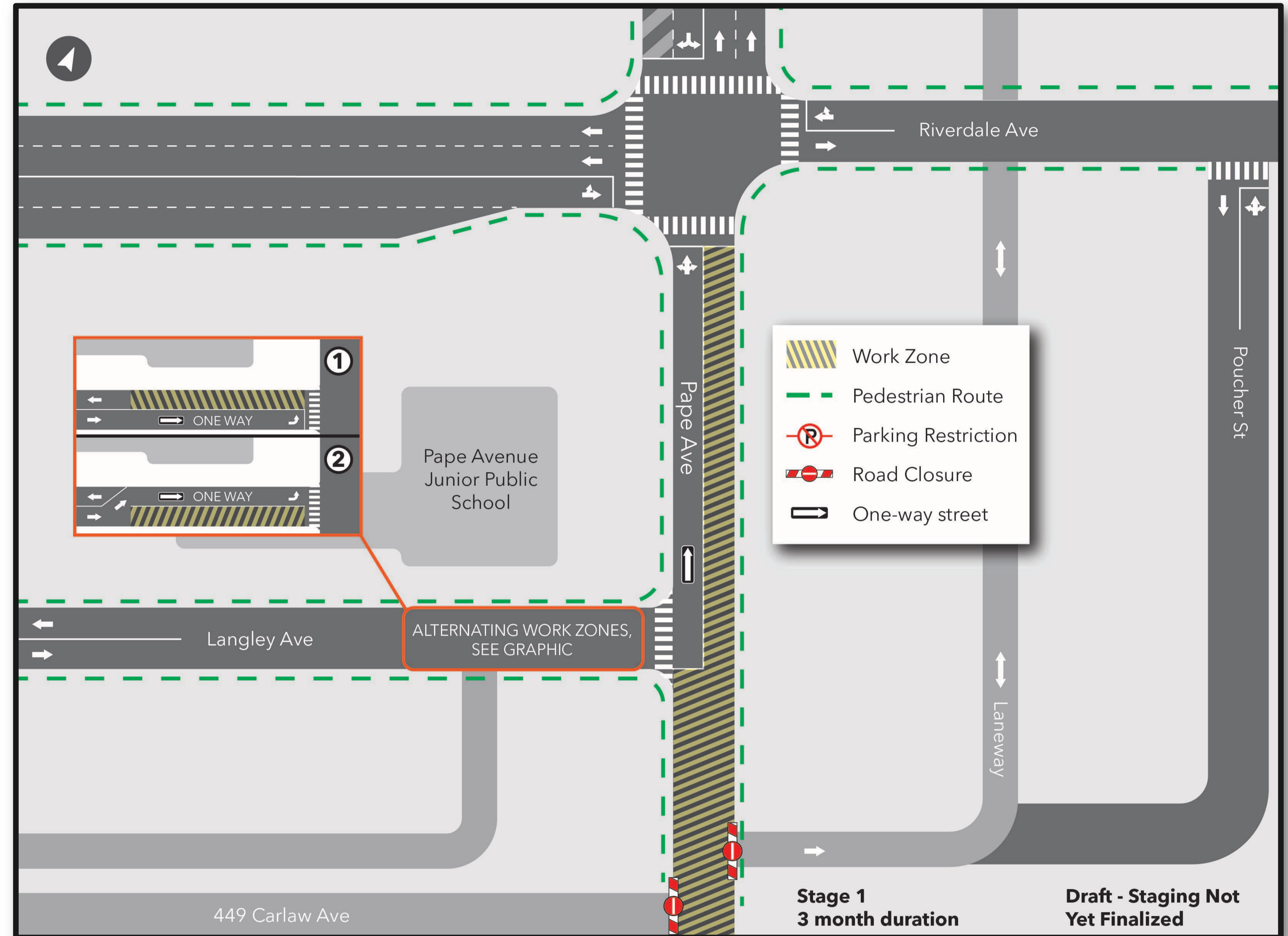
Upcoming Work - Sewer Relocations

- Works will commence in late summer to relocate the combined sewer and watermain off Pape Avenue between Riverdale Avenue and the 449 Carlaw Avenue plaza.
- Sewer work will take approximately 24 months in total and will be divided into distinct stages.
- Due to the nature of the work, certain stages will require a full closure of Pape Avenue south of Riverdale to conduct work safely for crews and the public.



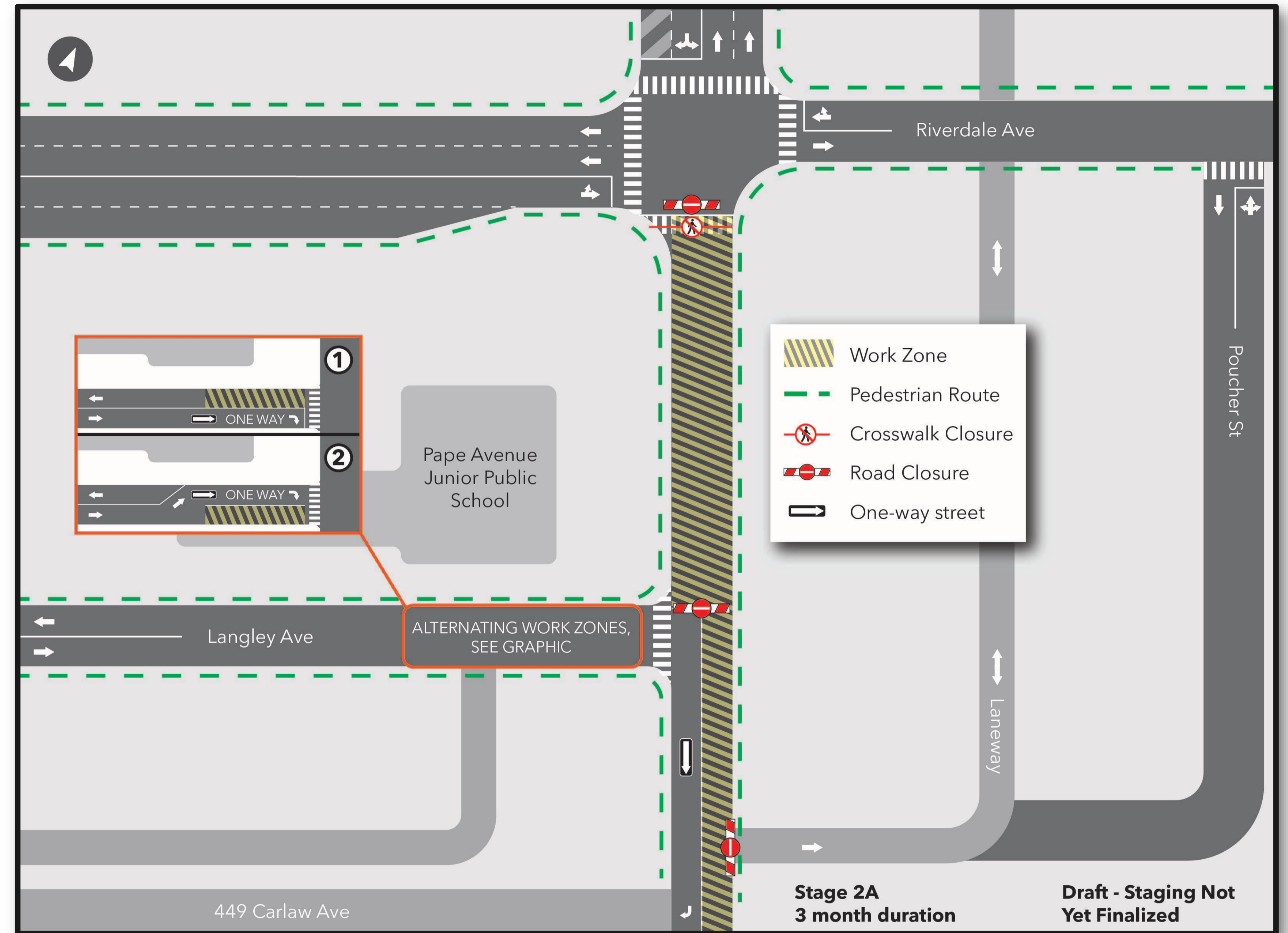
Upcoming Work - Sewer Relocations (Stage 1)

- Stage 1 will be the first of three stages to install a combined sewer down the east side of Pape Avenue. In addition, the relocation of Telus telecommunication lines on Pape Avenue and on Langley Avenue will be wrapped into this phase.
- Key impacts from stage 1:
 - Full closure of Pape Avenue between Langley and 449 Carlaw
 - Pape reduced to one lane northbound between Langley and Riverdale
 - Langley Avenue reduced to one lane south of Pape Avenue Junior Public School
 - East-north one-way traffic from east end of Langley Avenue north to Riverdale Avenue.
 - Street parking removal on Langley Avenue adjacent to the work zone.
- The work zone on Langley will alternate between the north and south side of the road. Pedestrian routes and traffic circulation will remain unchanged.



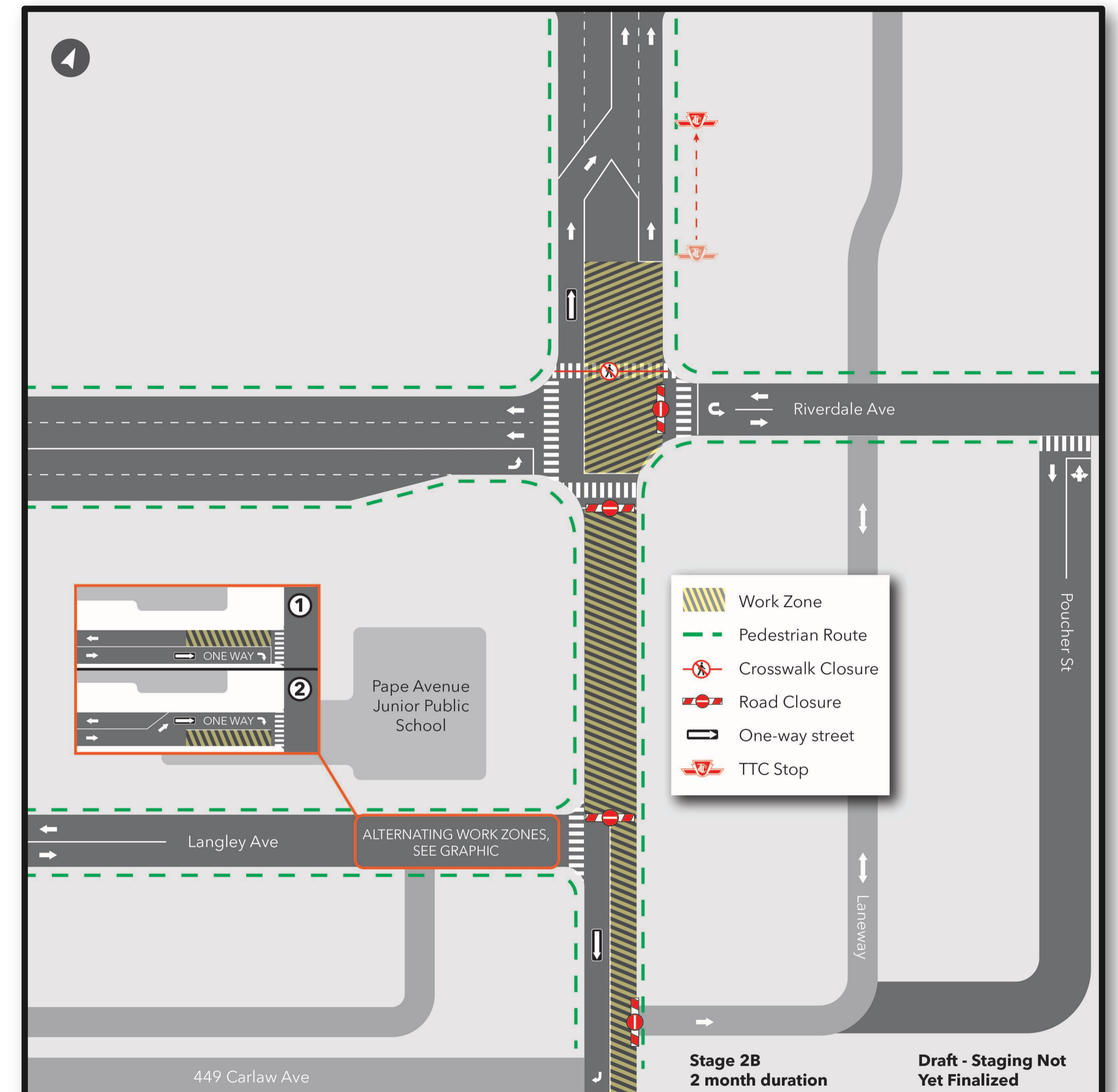
Upcoming Work - Sewer Relocations (Stage 2A)

- Stage 2A will continue combined sewer installation and will also mark the start of watermain installation.
- Key impacts from stage 2:
 - full closure of Pape Avenue between Langley and Riverdale.
 - south crosswalk closure at Pape and Riverdale
 - Pape reduced to one lane southbound between Langley and the 449 Carlaw plaza.
 - no vehicular access to the laneway east of Pape and south of Langley.
 - Langley Avenue reduced to one lane south of Pape Avenue Junior Public School.
 - east-south one-way traffic from east end of Langley Avenue south to 449 Carlaw plaza, with traffic exiting through the plaza, and;
 - street parking removal on Langley Avenue adjacent to the work zone.
- The work zone on Langley will alternate between the north and south side of the road. Pedestrian routes and traffic circulation will remain unchanged.



Upcoming Work - Sewer Relocations (Stage 2B)

- Stage 2B will be an adjustment to Stage 2A to finalize the combined sewer installation, connect it, and continue watermain work. It will introduce an additional construction area within and north of the Pape and Riverdale intersection.
- Additional impacts in stage 2B:
 - no vehicular traffic from Pape Avenue to Riverdale eastbound, or from Riverdale to Pape westbound
 - Eastbound traffic will divert north onto Pape, westbound traffic will divert north/south through laneway or turn around.
 - Pape Avenue converted to one-way northbound between Riverdale and Withrow.
 - the northbound TTC stop on Pape north of Riverdale will be relocated slightly north to move it away from the construction zone, and;
 - the south crosswalk at Pape and Riverdale will reopen, and the north crosswalk will close.
- The work zone on Langley will alternate between the north and south side of the road. Pedestrian routes and traffic circulation will remain unchanged.



Future Work – Sewer Micro-tunnelling

- The relocated storm sewer will run from the southwest corner of Pape Avenue and Riverdale Avenue to the northwest corner of Pape and Langley.
- To minimize impacts to the nearby school and daycare, the micro-tunnelling method has been chosen. Rather than digging an open trench between each end of the sewer, crews will use a small tunnelling machine to bore through the ground and construct the new sewer without impacts to the surface above the route of the new sewer.
- Micro-tunnelling is a proven technology that has been used throughout the city in sensitive areas, including under active Metrolinx rail lines.

