

QEW/Glendale (RR89) Diverging Diamond Interchange (DDI)- Project Overview and Update

Public Works Committee

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QEW / Glendale Avenue (RR89) Diverging Diamond Interchange (DDI)

Project Overview & Update



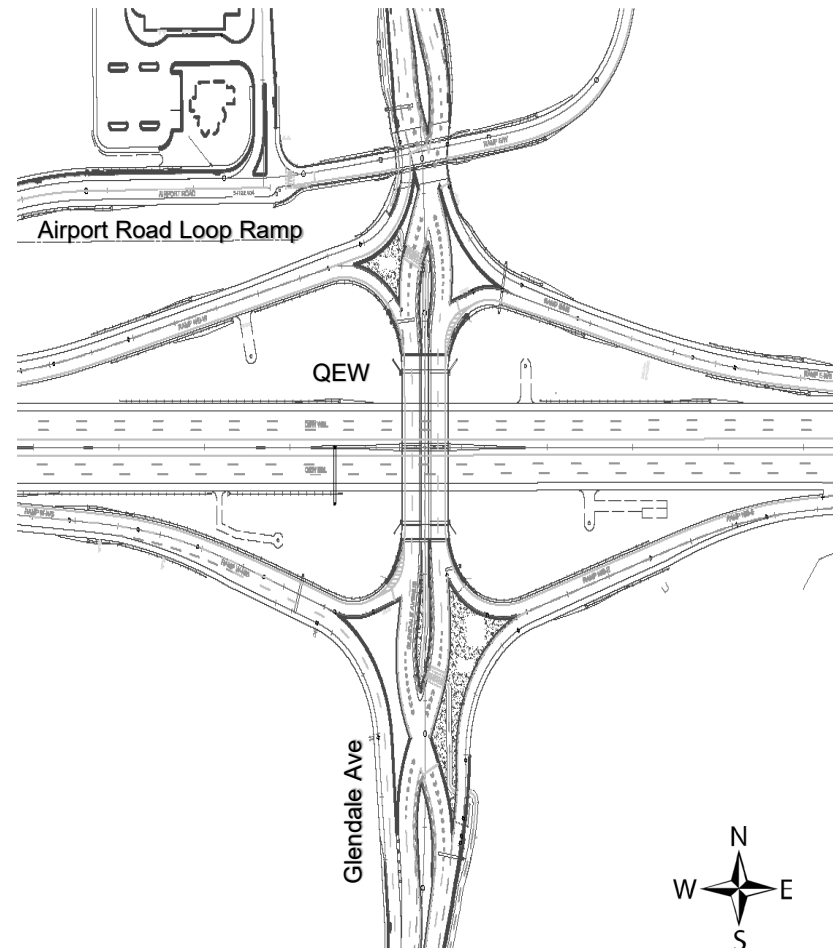
Scope of the Project

The Ministry of Transportation is working in partnership with Niagara Region on a design-build (DB) project for the construction of the following elements:

- Reconstruct the Queen Elizabeth Way (QEW)/Glendale Avenue interchange to a Diverging Diamond Interchange (MTO)
- Reconstruct the Glendale Avenue/York Road intersection to a single-lane roundabout with channelization (Niagara Region)
- Construct a new Airport Road loop ramp and connection road from Glendale Avenue to York Road/Airport Road intersection (Niagara Region)
- Construct a new commuter carpool lot at the northwest quadrant of the interchange (MTO)
- Rehabilitate the pavement on the QEW eastbound and westbound lanes between the east end of the Garden City Skyway bridge and QEW/Hwy 405 split (~3.0 km) (MTO)
- Extend the right turning lane of Glendale Avenue between Taylor Road and Niagara-On-The-Green Blvd (Niagara Region)

QEW / Glendale Avenue (MTO)

- This will be the first Diverging Diamond Interchange constructed in Ontario
- There are only two other operational in Canada at this time; 1 in Alberta and the other in Saskatchewan
- The total cost of the construction, including cost sharing partner's allocation is approximately \$54,000,000 (excluding HST)



Driving on a Diverging Diamond Interchange (DDI)

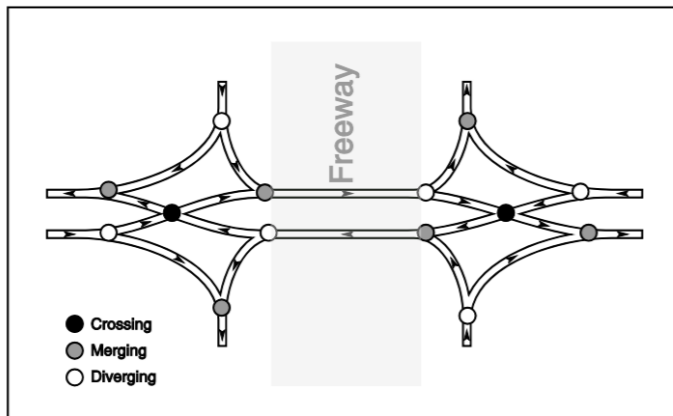


Exhibit 4-1. Conflict point diagram for DDI.

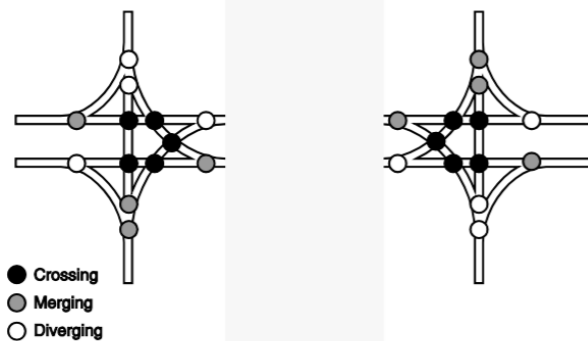
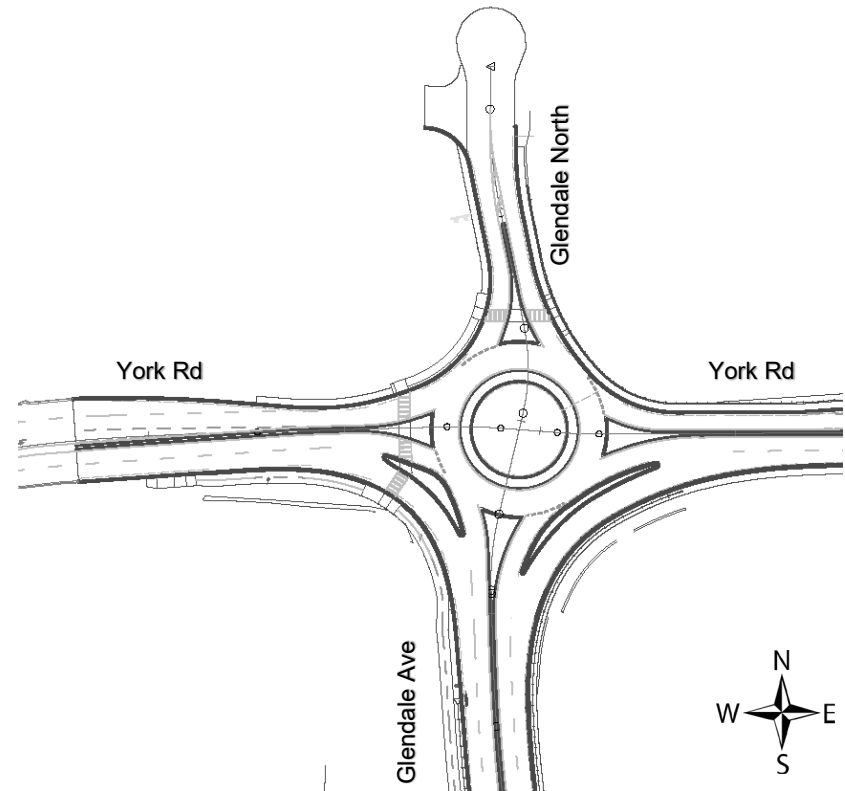


Exhibit 4-2. Conflict point diagram for conventional diamond.



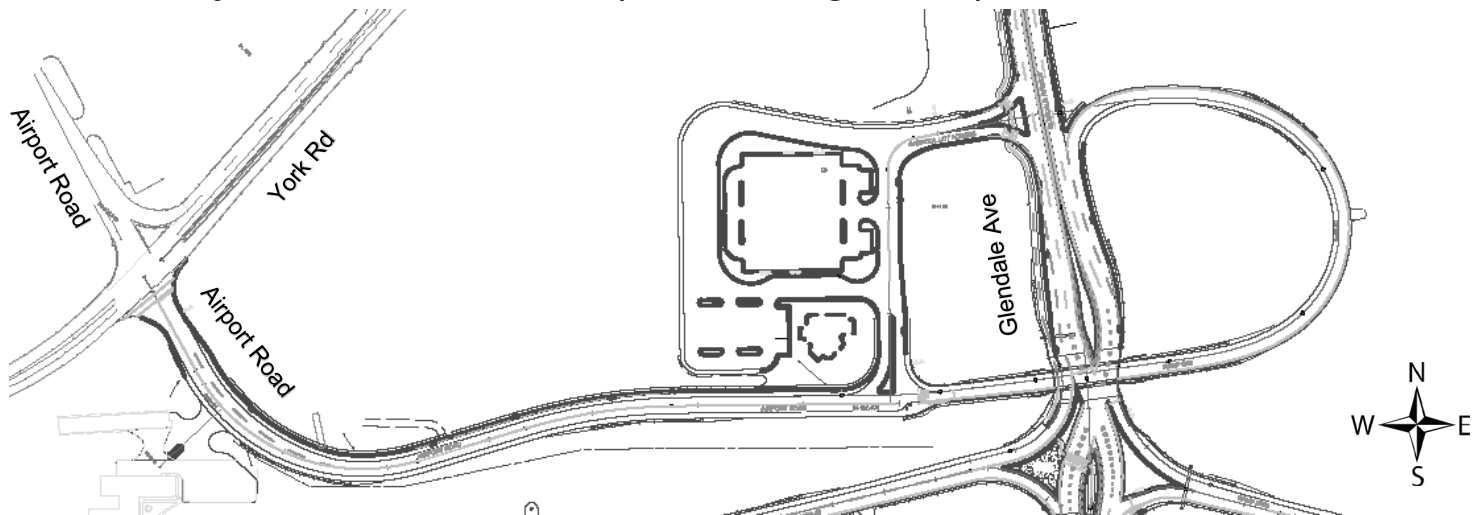
Single-lane Roundabout at Glendale Ave./York Rd. intersection (NR)

- This involves the conversion of an existing signalized intersection to a single-lane roundabout
- The approximate construction cost for the roundabout is approximately \$2,650,000.00 (excluding HST)



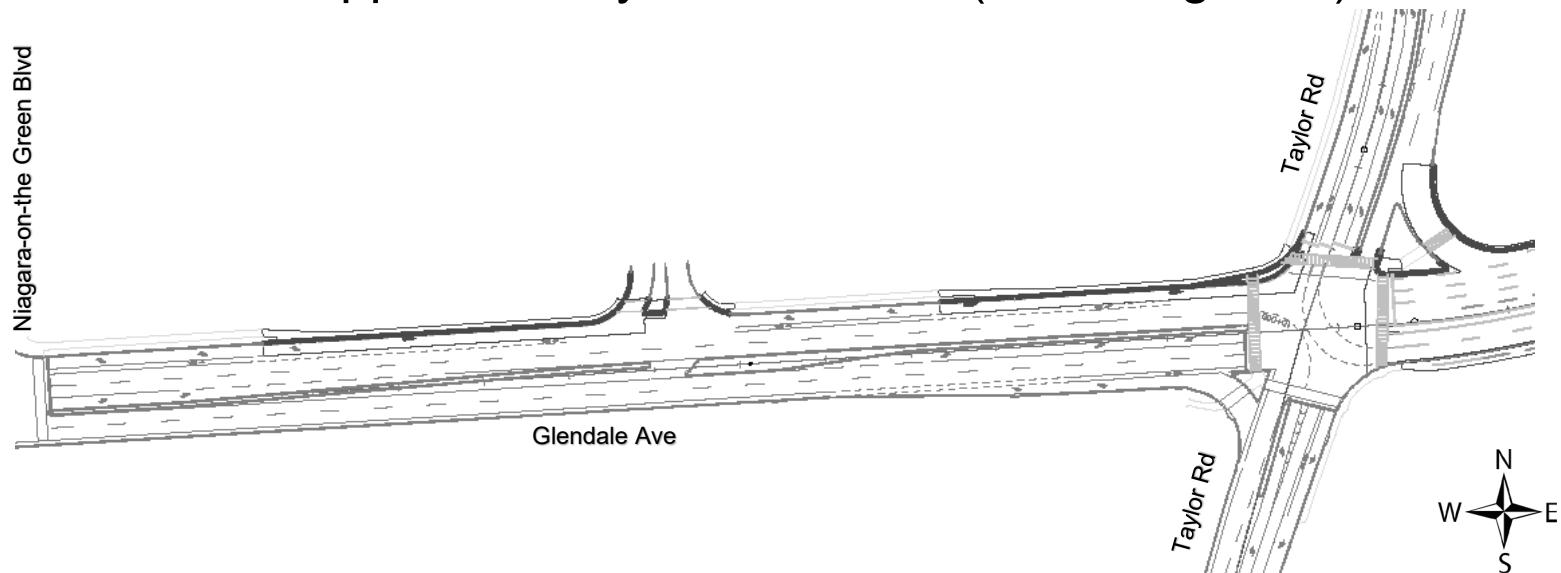
New Airport Road Loop Ramp (NR)

- This involves the extension of the signalized intersection at York Road and Airport Road, to loop around with a connection to the MTO commuter lot and a direct connection to the DDI. Allowing free flowing access to Airport Rd for any traffic heading towards Virgil/Old Town
- This will also include an MUP (multi-use pathway) and illumination
- The approximate construction cost for the loop ramp is approximately \$7,590,000.00 (excluding HST)



Extend Right Turning Lane on Glendale Ave. between Taylor Rd. and Niagara-On-The-Green Blvd. (NR)

- This involves the extension of the right hand turning lane to Niagara-on-the-Green Boulevard; allowing free flow access to the Outlet Mall
- The approximate construction cost for the right hand turning lane extension is approximately \$355,000.00 (excluding HST)



Construction Schedule & Key Milestones

- Detailed Design (Winter 2020 – Spring 2021)
- Construction Commenced (Spring 2021)
- QEW and Ramp Reconfiguration (Spring 2021 – Summer 2021)
- Construction of the New Glendale Bridge (Summer 2021 – Fall 2022)
- DDI Opens (Fall 2022)
- Removal of Old Glendale Bridge (Winter 2022)
- Construction of the Roundabout at Glendale and York (Winter 2022 – Summer 2023)
- Final Restoration and Landscaping (Spring 2023 – Summer 2023)
- Construction Complete (Summer 2023)

TENTATIVE SCHEDULE FOR GLENDALE INTERCHANGE PROJECT

PHASE ACTIVITY	Fall 2020	Winter 2020	Spring 2021	Summer 2021	Fall 2021	Winter 2021	Spring 2022	Summer 2022	Fall 2022	Winter 2022	Spring 2023	Summer 2023
DESIGN PHASE												
Site Investigation												
Detail Design Process												
Public Information Centre												
Clearing												
DCR 45-Day Public Review												
CONSTRUCTION PHASE												
Start of Construction												
Construction Laydown and QEW Ramp Reconfiguration												
Construction of the New Glendale Bridge												
Public Education Session												
Opening DDI Interchange												
Removal of the Existing Glendale Bridge												
Construction of the Roundabout at Glendale and York Road												
Landscaping and Site Restoration												

Transportation Environmental Study Report (TESR) Comments/Questions

Q.1 Existing and future traffic and safety issues associated with traffic queues on Glendale Avenue;

A.1 Addressed through construction of DDI

Q.2 Provision of safe and efficient Active Transportation crossing the QEW;

A.2 Addressed through construction of Multi-Use Path on DDI

Q3 Ensure that the multi-use path in the centre of the bridge structure is wide enough for both pedestrians and cyclists and that barrier walls be provided on both sides of multi-use path;

A.3 4.0m wide Multi-Use Path on DDI to be constructed

Q.4 Confirmation that the proposed Glendale Avenue/York traffic roundabout will accommodate large trucks safely and efficiently;

A.4 Addressed through detailed design of roundabout as turning radii of trucks verified

Q.5 Address the short weaving distance for eastbound vehicles, especially large trucks, exiting QEW/Glendale Avenue interchange eastbound to Highway 405;

A.5 The distance between the end of the new eastbound Glendale Avenue on-ramp and Highway 405 will be approximately the same. As such, there are no known weaving conditions.

Q.6 Congestion issues on Taylor Road access to Outlet Mall and associated downstream traffic queue issues on Glendale Avenue and the QEW mainline;

A.6 Addressed through construction of the Glendale Avenue right hand turn lane extension.

Transportation Environmental Study Report (TESR) Comments/Questions continued

Q.7 Opportunity for the implementation of a traffic management plan and signage to address peak travel periods and associated traffic congestion on QEW, Glendale Avenue and Taylor Road during construction;

A.7 Addressed through the schedules in the Design-Build RFP

Q.8 Provision of an Emergency Detour Route plan in the event any of the QEW interchange on-ramps are closed due to collisions or police activity during construction;

A.8 Addressed through the parameters in the Design-Build RFP

Q.9 Winter maintenance program for multi-use path in centre of Diverging Diamond Interchange;

A.9 Discussions to continue with key Municipal/Regional/MTO stakeholders

Q.10 Requirement that construction staging and timing will avoid access constraints at the interchange during the 2021 Summer Games (rescheduled to 2022);

A.10 Addressed through the schedules in the Design-Build RFP

Q.11 Opportunity for a pedestrian flyover of QEW linking developments located north and south of QEW and east of Glendale Avenue;

A.11 A pedestrian only flyover is not a part of the current DDI project; however a multi-use path was designed for active transportation and connectivity. This has been captured as part of the Glendale District Plan discussions.

Q.12 Opportunity for including an N-O-T-L Gateway feature as part of interchange design process;

A.12 Discussions to continue with key Municipal/Regional stakeholders for implementation after construction completion

Q.13 Maintenance arrangements for the loop ramp to Airport Road

A.13 Discussions to continue with key Regional/MTO stakeholders

For additional information on this project please see the Project website, which includes a direct link to the Design-Builders Project Page.

[Niagara Region QEW/Glendale Diverging Diamond Project](#)

Thank you