

Region of Waterloo

Transportation and Environmental Services

Design and Construction

To: Chair Tom Galloway and Members of the Planning and Works Committee

Meeting Date: April 12, 2022

Report Title: Project Approval Report for a Roundabout at New Dundee Road (Regional Road No. 12) and Robert Ferrie Drive.

1. Recommendation:

That the Regional Municipality of Waterloo approve the recommended design alternative for a proposed double lane roundabout at New Dundee Road (Regional Road No. 12) and Robert Ferrie Drive in the City of Kitchener, as described in Report TES-DCS-22-09, dated April 12, 2022.

Upon completion of construction, that The Regional Municipality of Waterloo amend Traffic and Parking By-law 16-023, as amended to:

- a) Remove from Schedule 17, Rates of Speed, 80 km/h on New Dundee Road (Regional Road 12) from 500 m east of Fischer-Hallman Road (Regional Road 58) to 550 m west of Homer Watson Boulevard (Regional Road 28);
- b) Add to Schedule 17, Rates of Speed, 80 km/h on New Dundee Road (Regional Road 12) from 500 m east of Fischer-Hallman Road (Regional Road 58) to 400 m west of Robert Ferrie Drive;
- c) Add to Schedule 17, Rates of Speed, 60 km/h on New Dundee Road (Regional Road 12) from 400 m west of Robert Ferrie Drive to 550 m west of Homer Watson Boulevard (Regional Road 28);
- d) Add to Schedule 15, Lane Designation, on New Dundee Road (Regional Road 12) southbound at Robert Ferrie Drive, Left and Right;
- e) Add to Schedule 15, Lane Designation, on New Dundee Road (Regional Road 12) eastbound at Robert Ferrie Drive, Through/Left and Through;
- f) Add to Schedule 15, Lane Designation, on New Dundee Road (Regional Road 12) westbound at Robert Ferrie Drive, Through/Right and Through;
- g) Add to Schedule 10, Level 2 Pedestrian Crossover, on New Dundee Road (Regional Road 12) at Robert Ferrie Drive, On All Entry and Exits

2. Purpose / Issue:

A double lane roundabout is recommended at New Dundee Road and Robert Ferrie Drive to address safety concerns and reduce delays to motorists.

3. Strategic Plan:

Approval of the Recommended Design Alternative meets the 2019-2023 Corporate Strategic Plan objectives under Strategic Focus Area 2, Sustainable Transportation to improve road safety for all users – drivers, cyclists, pedestrians, horse and buggies and to increase participation in active forms of transportation (cycling and walking).

4. Key Considerations:

The recommended roundabout would replace temporary traffic signals that were installed as an interim measure in 2019.

The main issues raised by the residents, tenants and property owners have been summarized into the following themes: high operating speeds on New Dundee Road; volume of commercial truck traffic; cost and impacts of roundabout construction; illumination and education for roundabout users.

The roundabout will factor into providing reduced speeds, as pending Council approval, the posted speed along New Dundee Road will be reduced from 80km/h to 60km/hr between Executive Place and Reichert Drive. The proposed double lane roundabout, including the entrance and exit to the roundabout would be designed geometrically to adequately accommodate all types of large commercial vehicles. The proposed roundabout would have a lower life-cycle costs, and reduce idling times, resulting in fuel savings and reduced vehicle emissions. It also provides a gateway feature and traffic calming into the Doon South community.

5. Background:

The original T-intersection included stop control on Robert Ferrie Drive and through traffic on New Dundee Road. Temporary traffic signals were subsequently installed as an interim measure in 2019. The intersection has experienced 7 collisions, 1 resulting in injury and 6 resulting in property damage between 2014 and 2018. Based on consideration of safety performance, traffic capacity and total life-cycle costing, staff are recommending the implementation of a double-lane roundabout. A roundabout would result in fewer injury collisions and reduced delays to motorists than the existing traffic signals.

6. Area Municipality Communication and Public/Stakeholder Engagement:

Area Municipality Communication: A copy of the Engage survey notification letter was mailed to Christine Michaud, Kitchener Ward 4 Councillor and staff at the City of Kitchener were informed of the proposed scope and timing of the project.

Public/Stakeholder Engagement: Engage survey notification letters were mailed to residents, tenants and business owners within the immediate vicinity of the intersection. Signs within the project limits were installed to direct the public to the Region of Waterloo's EngageWR website. The EngageWR website recorded that a total of 97 users participated in the survey and provided input.

Further information regarding the EngageWR survey public consultation and responses is provided in Attachment C.

7. Financial Implications:

The Region's approved 2022-2031 Transportation Capital Program includes a budget of \$2,945,000 in 2022-2025 for New Dundee Road at Robert Ferrie Drive Roundabout (project #07284) to be funded from the Regional Roads Development Charges Reserve Fund.

8. Conclusion / Next Steps:

Subject to Council approval, Regional staff would initiate the property acquisition process, finalize detailed design and coordinate required utility relocations, with construction planned for 2024

Attachments / Links:

Attachment A - Key Plan

Attachment B - Preliminary Design Drawing

Attachment C - Engage Survey Public Consultation and Responses (Docs # 3983038)

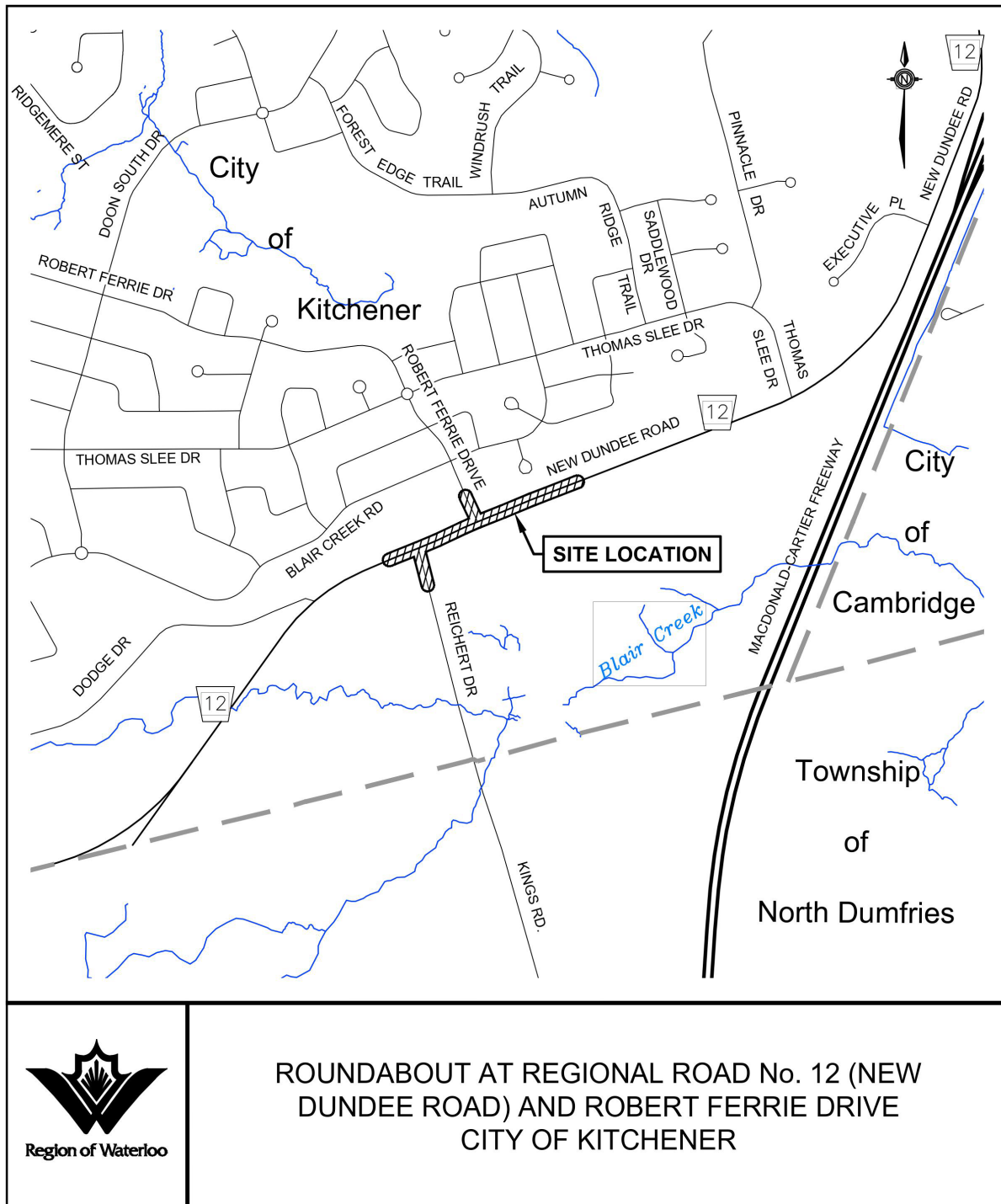
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Reviewed By: **Phil Bauer**, Director, Design and Construction

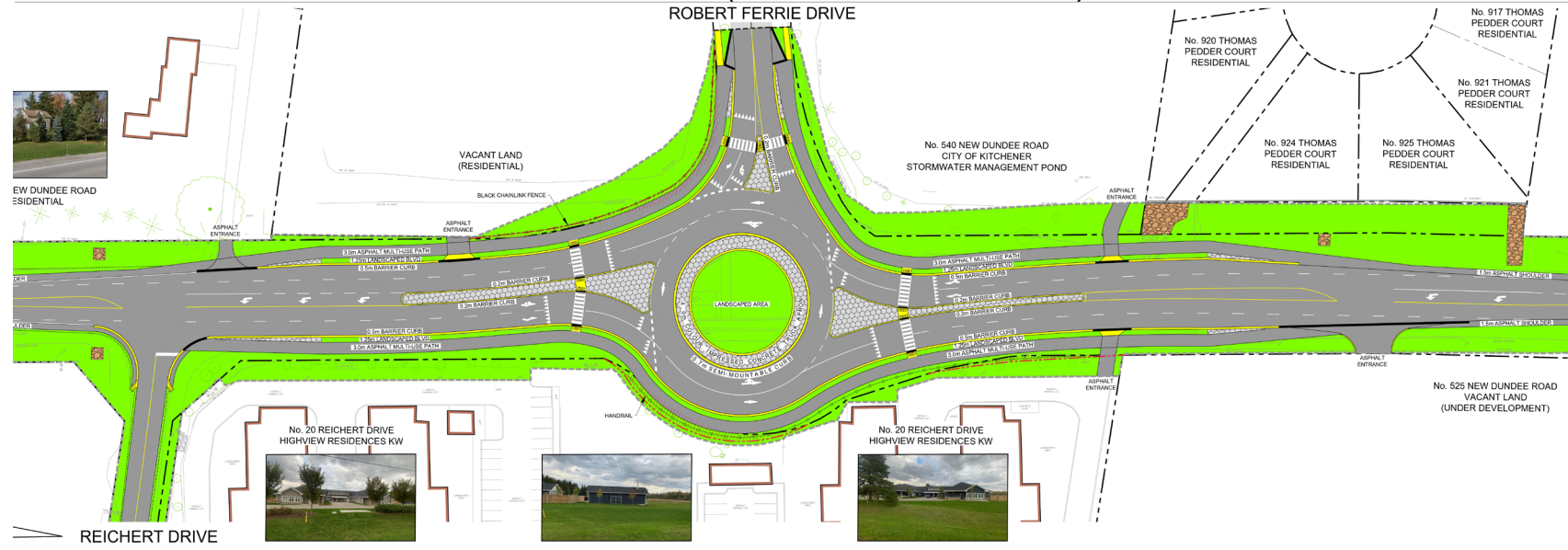
Approved By: **Thomas Schmidt**, Commissioner, Transportation and Environmental Services

Attachment - A Key Plan



Attachment B - Preliminary Design Drawing

ROUNDAABOUT AT REGIONAL ROAD No. 12 (NEW DUNDEE ROAD) AND ROBERT FERRIE DRIVE



Attachment C – Engage Survey Public Consultation and Responses

As part of the preliminary design process for this project, staff sought public input on the roundabout. Letters were mailed to residents, tenants and business owners within the immediate vicinity of the intersection, dated January 7, 2022.

Email correspondence, face-to-face meetings and phone discussions were held with the impacted property owners as follows:

- Highview Residences (20 Reichert Dr) – February 23, 2022,
- northwest quadrant vacant land and 628 New Dundee Road – February 25, 2022

Project notification signboards were placed at all three legs of the existing intersection from January 12th to February 11th, 2022.

Project information is available on the Region’s Engage website, including contacts for appropriate Region of Waterloo staff, and the opportunity to subscribe for project updates. The Engage website provided the opportunity to participate in a public survey regarding the project from January 12th to February 11th, 2022.

Ongoing discussions have taken place with City of Kitchener Engineering/ Transportation and Parks Staff, regarding project scope and property impacts on northeast quadrant of the intersection (storm pond). The Region will be relocating “Topper Woods” subdivision sign in coordination with City Parks Staff outside of the construction limits.

Main Issues Raised by the Public and Adjacent Property Owners

The Engage website recorded that a total of 97 users participated in the survey. From the Engage website there were 47 survey responds in favour of implementing a roundabout at this location, 42 that were not in favour, and 8 that were neutral or did not provide a response, when asked, “What do you like about a proposed roundabout at this location?” 72 survey responders live in the Doon South Neighbourhood, 81 drive through the intersection and 46 either walk or cycle through the intersection. The main issues raised by the public and adjacent property owners have been summarized into the following themes:

a) High Operating Speeds on New Dundee Road

One of the advantages of a roundabout is the lower speeds of all vehicles using the roundabout. The operating speed of the roundabout would be designed in the range of 30km/hr to 49 km/hr. The Region’s current practice is to lower posted speeds on Regional Roads to 60km/hr in each direction, within 400m of approach to a roundabout. The Region will make a recommendation to Council that the posted speed on New Dundee Road, from Executive Place to Reichert Drive be lowered from the existing 80km/hr to 60km/hr.

b) Volume of Commercial Truck Traffic

It is typical for commercial truck traffic to make use of roundabout intersections throughout the Region of Waterloo. The proposed double lane roundabout, including the entrance and exit to the roundabout would be designed geometrically to adequately accommodate all types of large commercial vehicles. Roundabout design will include a turning apron with a mountable curb on the central island to compensate for a larger vehicle's off-tracking and reduce the points of conflict in the roundabout.

c) Cost and impacts of Roundabout Construction

Regional staff acknowledge there is an immediate cost for roundabout construction at this location. The proposed roundabout would reduce injury collisions, reduce delays, have lower life-cycle costs, and reduce idling times resulting in fuel savings and reduced vehicle emissions.

Traffic that uses this intersection will be impacted during roundabout construction. Upon completion of detailed design, construction staging and appropriate detours will be established based on a detailed assessment of construction scope and traffic management options. Regional staff will work with the City of Kitchener staff and emergency services personnel to develop staging and detour plans and will effectively communicate these plans to the public well in advance of construction.

d) Illumination

As part of the detail design, the Regional Illumination Policy will be reviewed and applied to ensure the roundabout is illuminated appropriately. Typically roundabouts have higher illumination levels than signalized intersections.

e) Education for Roundabout Users

Prior to completion of the roundabout construction, the Region will mail educational pamphlets to area residents, tenants and business owners promoting roundabout safety. Signs will be posted in advance of construction, informing motorists, cyclists and pedestrians of the upcoming roundabout and instructions on where to obtain educational online tools on the Safe Roads Waterloo Region website.

f) Provisions for Active Transportation

The roundabout design includes a 3.0m wide paved shared multi-use path facilities on the north and south sides of New Dundee Road. Per the Region's 2018 Transportation Master Plan, the Region plans to widen the road platform to include 1.5m paved shoulders on both sides of New Dundee Road, extending from the east limit of the roundabout to

Executive Place. This will provide the missing link of paved shoulders on New Dundee Road between Fischer-Hallman Road and Homer Watson Boulevard.

g) Impact to Heritage Lands

Regional staff met with the property owners at 628 New Dundee Road to discuss this project. They expressed concern as to how their home would be impacted during construction. The Region acknowledges their home is a Municipally Registered property under the Ontario Heritage Act. The historic yellow brick dwelling is listed on the City of Kitchener register. Regional work will not impact the property at 628 New Dundee Road, as the scope of work is contained to the existing right-of-way. Regional Cultural Heritage Staff will be kept informed as this project progresses, to ensure the site is properly protected. This will include a preconstruction survey of the home and property, along with any additional mitigation requirements, as outlined by Cultural Heritage Staff. The Region's scope will require land acquisition from the vacant land at the northwest quadrant of the intersection of New Dundee Road and Robert Ferrie Drive (directly east of 628 New Dundee Road).