

Norval West Bypass – Online PIC #2 Presentation

Script – Video #3

Slide 12 (Video 3 - Road Alignment Alternatives)

Hello and welcome to the Road Alignment Alternatives video – the third of four videos for the Norval West Bypass study. In this video, we will review the development of alternative design concepts, evaluation criteria, and the evaluation of the alternative design concepts.

Slide 13 (Process for Developing Recommended Solution)

This slide shows the process followed to develop the recommended solution.

At the first Public Information Centre, we presented:

- The road cross-sections for both the Norval West Bypass and 10 Side Road corridors, including the arrangement of roadway elements such as travel lanes and active transportation; and
- The road corridor concepts with options for where each road corridor may be located.

At this Public Information Centre, we will present:

- The road alignments, including options for the alignment of the roadway within the preferred corridor where there is flexibility to avoid constraints;
- The road design features, including intersection development and consideration of modifications to the typical cross-section and alignment in constrained areas; and
- The recommended preliminary design for both the Norval West Bypass and 10 Side Road corridors.

Slide 14 (Road Corridor Concepts - Key Considerations)

As outlined in video #2, concept B2 was selected as the preferred corridor concept. The Norval West Bypass Corridor and 10 Side Road preliminary design alignments were developed in consideration of:

- Connections to Highway 7 and 10 Side Road;
- The existing 17 metre grade change over 90 metres between Highway 7 and the Southeast Georgetown Secondary Plan area; and
- Minimizing impacts to key features.

Slide 15 (Road Alignment – Design Alternatives Overview)

There are three road components to the design alternatives that have been developed and evaluated for this study.

1. Norval West Bypass – the Norval West Bypass considered road alignments within Road Corridor Concept B

2. Highway 7 Intersection – intersection configurations were developed for the intersection of Highway 7 and the Norval West Bypass
3. 10 Side Road – intersection configurations were developed for the intersection of 10 Side Road and the Norval West Bypass

The following slides will present the design alternatives carried forward for evaluation.

Slide 16 (Design Considerations and Opportunities)

The development of design alternatives and selection of the preliminary preferred plan considers a number of potential opportunities:

- Supports north-south travel;
- Maximizes corridor opportunities while minimizing impacts;
 - Provides for cycling and pedestrians along the corridor including protection at intersections;
 - Accommodates all road users including trucks and farm equipment;
 - Minimizes impacts to properties;
- Integrates with the Southeast Georgetown Secondary Plan;
- Minimizes impacts to key features (such as natural and cultural features);
- Considers drainage, stormwater management, and flood storage; and
- Considers major utilities.

Slide 17 (Road Alignment Design Alternatives)

Three road alignments were developed within the Norval West Bypass Road Corridor Concept B; Alignment B1, B2 and B3. All three alignments tie into Highway 7 at the same location. Alignments B1 and B2 tie into the same location at 10 Side Road, while Alignment B3 has a tie-in point further to the east on 10 Side Road.

These alignments were developed with consideration for the design elements described on the previous slide. An evaluation of these alignments is provided later in this presentation.

Slide 18 (Highway 7 Intersection Alternatives)

A new intersection will be created at the new Norval West Bypass and Highway 7. Three alternative concepts were considered for the new intersection and corridor alignment:

- Intersection Alternative 1 is a T-intersection with Highway 7 traffic continuing straight.
- Intersection Alternative 2 is a T-intersection with the new Norval West Bypass traffic continuing straight to and from Highway 7.
- Intersection Alternative 3 introduces a roundabout for all traffic to navigate.

Slide 19 (Evaluation of Highway 7 Intersection Alternatives)

The three Highway 7 intersection alternatives were screened and evaluated to determine the preliminary preferred intersection.

Intersection Alternative 1:

- Provides acceptable future Level of Service C. Level of Service is a representation of an average vehicle delay at an intersection. A Level of Service A indicates minimal delays, where a Level of Service F indicates long delays; and
- Accommodates pedestrians and cyclists.

However, Alternative 1 also:

- Has impacts to frontage of properties with Cultural Heritage Value or Interest along Highway 7;
- Limits access opportunities to adjacent properties; and
- Requires widening of Silver Creek Bridge. Widening will have impacts to the natural environment.

Intersection Alternative 2:

- Provides acceptable future Level of Service C,
- Accommodates pedestrians and cyclists, and
- Has fewer impacts to frontage of properties with Cultural Heritage Value or Interest along Highway 7.

However, Intersection Alternative 2 also:

- Limits access opportunities to adjacent properties; and
- Requires widening of Silver Creek Bridge. Widening will have impacts to the natural environment.

Intersection Alternative 3:

- Provides acceptable future Level of Service A,
- Accommodates pedestrians and cyclists;
- Has fewer impacts to frontage of properties with Cultural Heritage Value or Interest along Highway 7;
- Has potential to improve access opportunities to adjacent properties; and
- Does not require widening of Silver Creek Bridge.

Based on the screening and evaluation of the Highway 7 intersection alternatives, Intersection Alternative 3, the roundabout, is carried forward as the preliminary preferred intersection for Highway 7 and the Norval West Bypass.

Slide 20 (Preferred Highway 7 Intersection – Alternative 3)

Alternative 3 is the preferred Highway 7 intersection alternative. Since this intersection overlaps with Highway 7, a provincially owned highway, the locations and overall configuration of the roundabout are subject to Ministry of Transportation review and approval.

Slide 21 (10 Side Road Intersection Alternatives)

A new intersection will be created at the Norval West Bypass and 10 Side Road. Two roundabout alternatives for the 10 Side Road and Norval West Bypass intersection are shown below.

Intersection Alternative 1 was developed for the intersection of 10 Side Road and the Norval West Bypass, incorporating the previous preliminary design of the Winston Churchill Boulevard M-C-E-A Study (2005).

Intersection Alternative 2 was developed to provide flexibility when integrated with the Southeast Georgetown Secondary Plan, by allowing the change from the Winston Churchill Boulevard M-C-E-A Study preliminary design.

Both of these designs protect for a potential future Winston Churchill Bypass (identified in the Halton/Peel Boundary Area Transportation Study), subject to a future separate M-C-E-A Study, as indicated by the grey arrow on the figures.

Under both scenarios, 10 Side Road will be realigned.

Slide 22 (Design Alternatives Overview)

This slide presents how all the discussed design alternatives fit together, including the Norval West Bypass road alignment alternatives, the preferred Highway 7 intersection alternative and 10 Side Road alternative intersections.

The Preferred Highway 7 Intersection Alternative is the roundabout, and is the recommended intersection for all of the alignments.

Norval West Bypass Alignments B1 and B2 connect Highway 7 to 10 Side Road with a direct path. These two alignments connect to 10 Side Road Intersection Alternative 1.

Norval West Bypass Alignment B3 was developed to better integrate with the Southeast Georgetown Secondary Plan, and connects to 10 Side Road Intersection Alternative 2.

These combinations are evaluated on the following slides.

Slide 23 (Evaluation Criteria)

The evaluation criteria used to assess the alternatives is presented on this slide, and considers the following:

- Socio-economic environment, including traffic noise, air quality, light pollution, and property impacts

- Natural environment, including surface water and groundwater, and natural heritage features such as ecosystems, wildlife, species-at-risk, fish and fish habitat, and drainage features
- Transportation, including road geometry, access to adjacent properties and active transportation
- Cultural environment, including archaeological resources and cultural heritage resources
- Engineering/technical considerations, including constructability and existing utilities
- Preliminary cost estimate, including estimated capital costs

Slide 24 (Evaluation of Design Alternatives)

The evaluation of design alternatives is presented below. As noted earlier, each Alignment was evaluated using the Preferred Highway 7 Roundabout alternative.

The design alternatives were evaluated based on the evaluation criteria on the previous slide. As a result of the evaluation, Norval West Bypass Alternative B3, and 10 Side Road Alternative 2 were determined to be the preliminary preferred design alternative.