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GO Road/Rail Grade Separations

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Summary

- There are 185 level crossings across the GO system, where train and vehicle traffic intersect
- As traffic volumes increase, grade separation of these intersections may be considered
 - A road/rail grade separation is a bridge that allows road traffic to pass over or under train traffic, eliminating the level crossing
- Metrolinx is establishing a process for consideration of grade separations across the network as part of its GO Regional Express Rail initiative
- This report will describe the process and ongoing engagement with municipalities

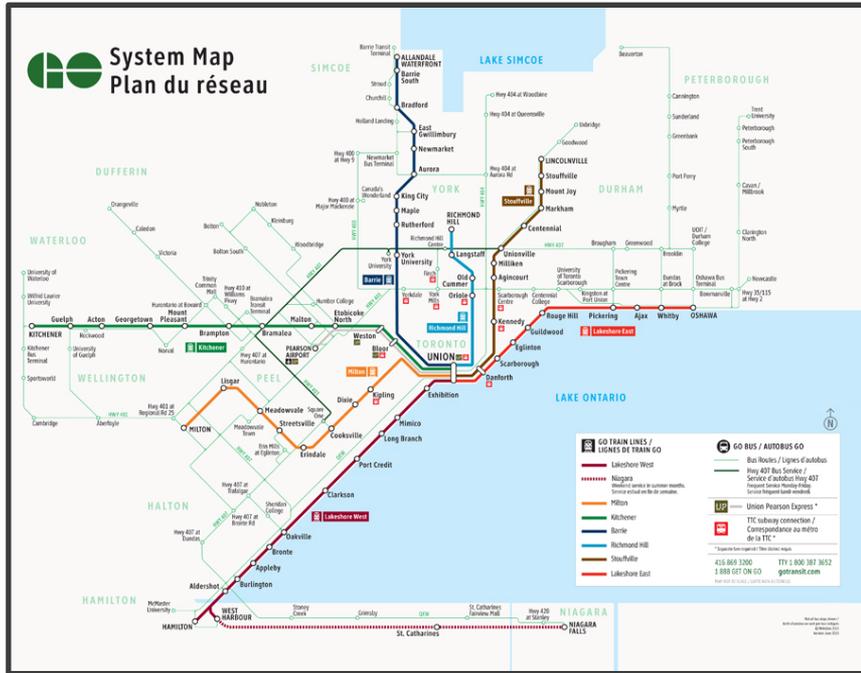
Basic Grade Separation Framework

- Grade Separations result in new infrastructure that is shared by the rail corridor owner and road owner (usually a municipality)
 - A new crossing agreement is then developed to outline responsibilities for maintenance and improvements for each party
- Typically, grade separations are initiated and largely funded by the entity that requires the separation
 - A railway may look to improve operational efficiency
 - A municipality may wish to address traffic congestion
 - Both parties may seek to enhance safety or meet other needs
- In the past, GO Transit has worked with municipalities on a case by case basis to build and fund grade separations where needed

Example: Denison Avenue



Regional Express Rail



- Regional Express Rail will transform the way GO serves the region with frequent service of up to 15 minutes on all corridors
- This provides an opportunity to plan for the anticipated need for grade separations on a system wide basis
- RER construction and implementation will make future road/rail grade separation projects more difficult, disruptive and expensive due to increased train traffic, more tracks, and electrification

Grade Separation criteria

Metrolinx has conducted an assessment of level crossings that takes into account the following:

- Road and rail traffic volumes (current and future)
- Existing conditions (roadways, transit use, queuing, safety)
- Technical considerations (geometry, constructability)
- Operations (service reliability, special road users)
- Community impacts (connectivity, land use, environment)
- Cost (construction, maintenance)
- Alternatives (road closures, mitigation)

Types of Response

Grade separations are only one of several options available, depending on specific circumstances



Process

In order to determine grade separations, Metrolinx is undertaking a four stage process:

Stage 1: Network assessment

- Metrolinx has conducted preliminary work to identify and assess all level crossings against basic criteria (complete)

Stage 2: Municipal consultation

- Engaging municipalities for feedback on initial assessment and incorporating local perspective (e.g. transportation/land use planning, public realm, environment)

Stage 3: Identify priorities and timing

- Develop shortlists, refine criteria if needed

Stage 4: Initiate crossing agreements

- Advance selected projects and establish terms and funding

Preliminary Network Assessment Methodology and Approach

- Evaluated 185 crossings on all seven GO corridors
- Identified four main criteria: usage and existing conditions, operations, social/environmental and cost/constructability
 - Each category contained several sub categories
 - Usage included “exposure index,” a standard measure of traffic volumes typically used by transportation agencies in crossing assessment
 - Assessment looked at 2015 and 2025 scenarios
- The results have been weighted 60% usage, 20% operations, 10% social/environmental and 10% cost/constructability
- The weighted scores are being used as the initial criteria

Proposed Policy Approach

- Grade separations can require extensive planning and major construction.
 - Together, Metrolinx and municipalities will look to reach agreement on preferred locations
 - Environmental Assessments, design, consultation and construction can be initiated cooperatively
- Decisions will be based on a combination of:
 - Metrolinx requirements
 - Municipal requirements
 - Community consultation and engagement
 - Construction considerations
 - Available funding
 - Alternative mitigation measures
- The implementation timing will depend on the above, not all proposed projects will be launched immediately and may be more suitable to future implementation

Proposed Implementation Approach

- Historically, most grade separations are jointly funded by both Metrolinx and municipalities
 - Metrolinx to identify priority grade separations needed to support RER within the limits of available funding
 - Municipalities encouraged to identify grade separations needed locally and which projects could be accelerated to avoid increased costs
- Agreements with municipalities will govern priority, scope, contribution shares and timing
- Joint approach to funding allows for expanded program, addressing a broader reach in the short to medium term

Next Steps

- Technical discussions have started with municipalities on specific grade separations (e.g. planning, environmental assessments)
- Spring/Summer 2016: Work with municipalities to refine preliminary assessments and confirm policy/funding approach
- Fall 2016: Report back to Board with comprehensive plan for advancing priority grade separations
- Winter 2016: Finalize grade separation agreements
- Ongoing: Community engagement and consultations on proposed grade separations



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