• Background
• Lincoln Fields Station and alignment improvement
• LRT alignment, west of Lincoln Fields to Queensview, including:
  – Pedestrian bridge replacement at Woodroffe
  – Elevated LRT structure to grade separate tracks to Bayshore and Baseline
  – LRT tunnel alignment at Connaught Avenue
  – Queensview Station and pedestrian bridge
• Closure of Queensway Station
• Connectivity
• Next Steps
Background

• Spring 2016, design modifications were recommended along Confederation Line West (at Cleary Station) and Confederation Line East (Blair to Montreal stations)
  ✓ The modifications were included in the respective Confederation Line Environmental Assessments (EAs)

• Preliminary engineering design work has been ongoing and staff identified additional improvements along Confederation Line West:
  – Alignment and station shift at Lincoln Fields
Confederation Line West
West of Lincoln Fields
Lincoln Fields
Improved Alignment
Lincoln Fields Station
Improved Concept
LRT Alignment
West of Lincoln Fields
Pedestrian Bridge Replacement

• Alignment cannot avoid the existing east piers of the pedestrian bridge at Woodroffe High School
• The bridge will be demolished and replaced with a new bridge over the LRT alignment
• Construction staging of new bridge and demolition of existing bridge is being analyzed
• Impacts on connectivity during bridge construction will be minimized to the extent possible, including coordination with Woodroffe High School
• New bridge span to be coordinated with new permanent pathway connections
  – Connectivity to Lincoln Fields Station and throughout the Pinecrest Creek corridor
LRT Elevated Alignment at Bayshore/Baseline Split

• West of Lincoln Fields, the alignment splits to Bayshore Station and Baseline Station
  – At the split, the tracks must be grade separated to avoid trains from one terminal delaying trains from the other end of the line

• By aligning the tracks to Bayshore over the southbound tracks to Baseline (with Baseline tracks remaining at grade):
  – The existing Transitway to Iris may remain open during construction
  – Multi-use pathways can be maintained under the elevated ‘split’ structure
  – Visual impact of bridge/berm can be minimized
LRT Elevated Alignment at Bayshore/Baseline Split
LRT Elevated Alignment at Bayshore/Baseline Split
LRT Elevated Alignment
Traffic Operations during Construction
LRT Tunnel Alignment
At Connaught Avenue

• Rapid transit alignment has been protected by City for decades
• Length of tunnel roof sections is approximately 170 metres each, separated by a 40 metre open air vent
• With an open air vent, mechanical ventilation is unlikely to be required
• Tracks rise to grade in an open cut with retaining walls at both ends of the tunnel
LRT Tunnel Alignment
Under Connaught Avenue
LRT Tunnel Alignment
Under Connaught Avenue
LRT Tunnel Alignment
Under Connaught Avenue
LRT Tunnel Alignment
Under Connaught Avenue
LRT Tunnel Alignment
Under Connaught Avenue
LRT Tunnel Alignment
Property Impacts

• Three City properties, currently under lease, will be required for construction:
  – 999, 1003 and 1007 Connaught Avenue

• A small portion of two properties will be required for a subsurface utility easement:
  – 2504/2505 Hanlon Avenue

• Mobilization sites for construction staging will also be required adjacent to the Connaught tunnel and the Pinecrest Creek bridge

• Construction areas are largely outside of the paved area of OC Transpo Queensview garage
LRT Tunnel Alignment Property Impacts
Preliminary Noise and Vibration Analysis

• Ambient noise levels will be impacted by LRT operations at the following locations:
  – Pinecrest Creek Bridge
  – Elevated LRT structure (bridge) at the Bayshore/Baseline split
  – Connaught Tunnel (at grade through a short section of the park)

• Noise impacts from LRT operations are being analyzed

• Ambient noise levels are currently impacted by:
  – Highway 417 and Transitway operations
  – OC Transpo garage on Queensview

• Preliminary vibration analysis has been completed
  – Resilient track fasteners will mitigate to acceptable standards
  – Track bed system will be confirmed by successful bidder
  – Floating slabs are also a possibility
Vibration Mitigation Measures

Resilient Fasteners
Vibration Mitigation Measures

Resilient Fasteners

Floating Slab
Queensview Station
# Forecasted Ridership

<table>
<thead>
<tr>
<th>Station</th>
<th>Total Boardings and Alightings (2031, AM Peak Hour)</th>
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<tbody>
<tr>
<td>New Orchard</td>
<td>636</td>
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<tr>
<td>Lincoln Fields</td>
<td>2,521</td>
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<tr>
<td>Queensview</td>
<td>540*</td>
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<tr>
<td>Pinecrest</td>
<td>640</td>
</tr>
</tbody>
</table>

*Queensview Station is busier than 11 other Stage 2 stations

Ridership forecast takes into account the new pedestrian bridge over Highway 417.
Connectivity
Next Steps

• Upcoming opportunities for public comment:
  – Environmental Assessment process
    • Notice of Completion (September 30, 2016)
  – Staff report outlining recommended design improvements:
    • Finance and Economic Development Committee (Fall 2016)
    • City Council (Fall 2016)
Questions?
Alternate LRT Elevated Alignment at Bayshore/Baseline Split
Alternate LRT Elevated Alignment at Bayshore/Baseline Split
Conflict with Pinecrest Creek Culvert
Lincoln Fields Station
Improved Concept
Platform Configuration

Note: Not to scale