

Confederation Line West Alignment Improvement

September 15, 2016

← STAGE
ETAPE ↓ ② →

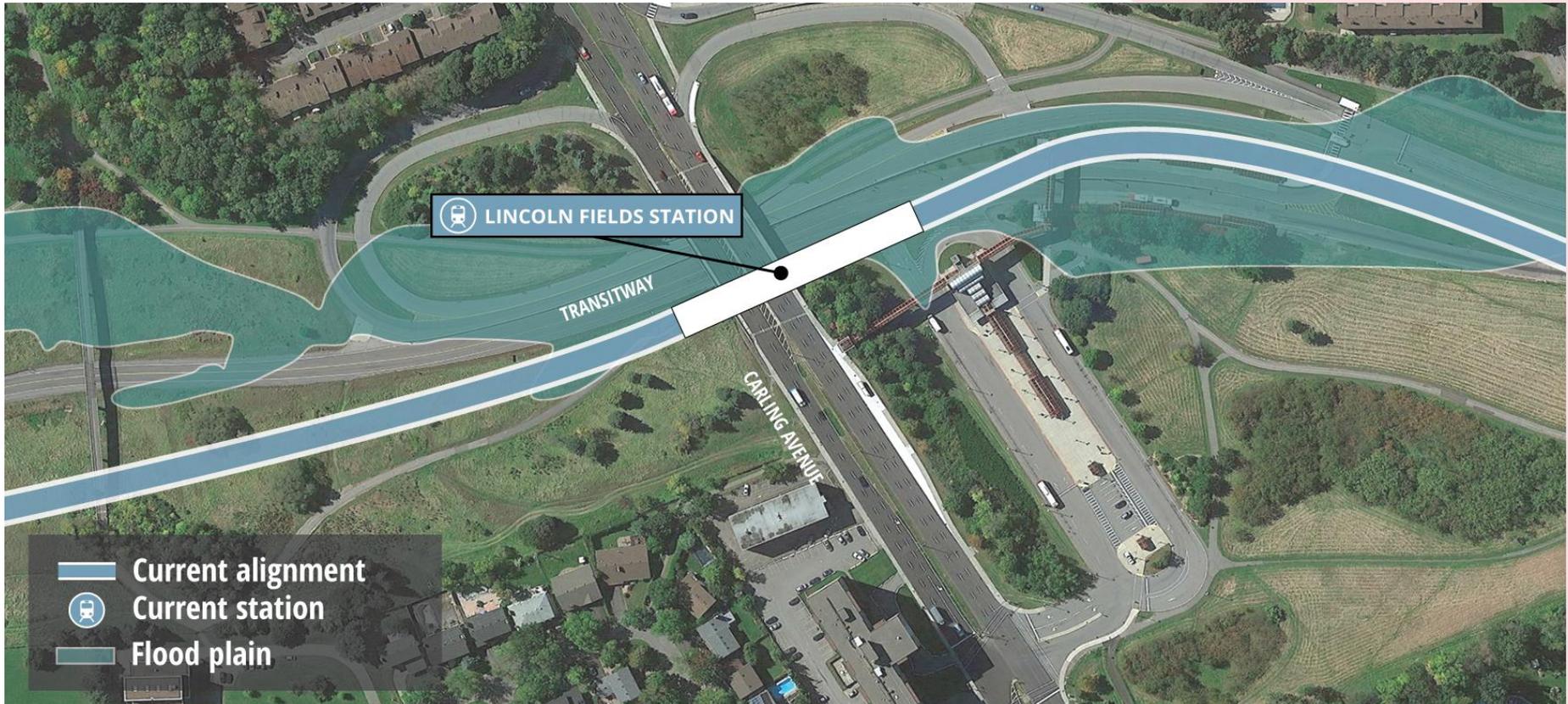


Agenda

- Background
- Lincoln Fields Station
 - Environmental Assessment Alignment Challenges
 - Improved Alignment Benefits
- LRT Alignment, West Portal to Woodroffe
- New Orchard Station
- Next Steps



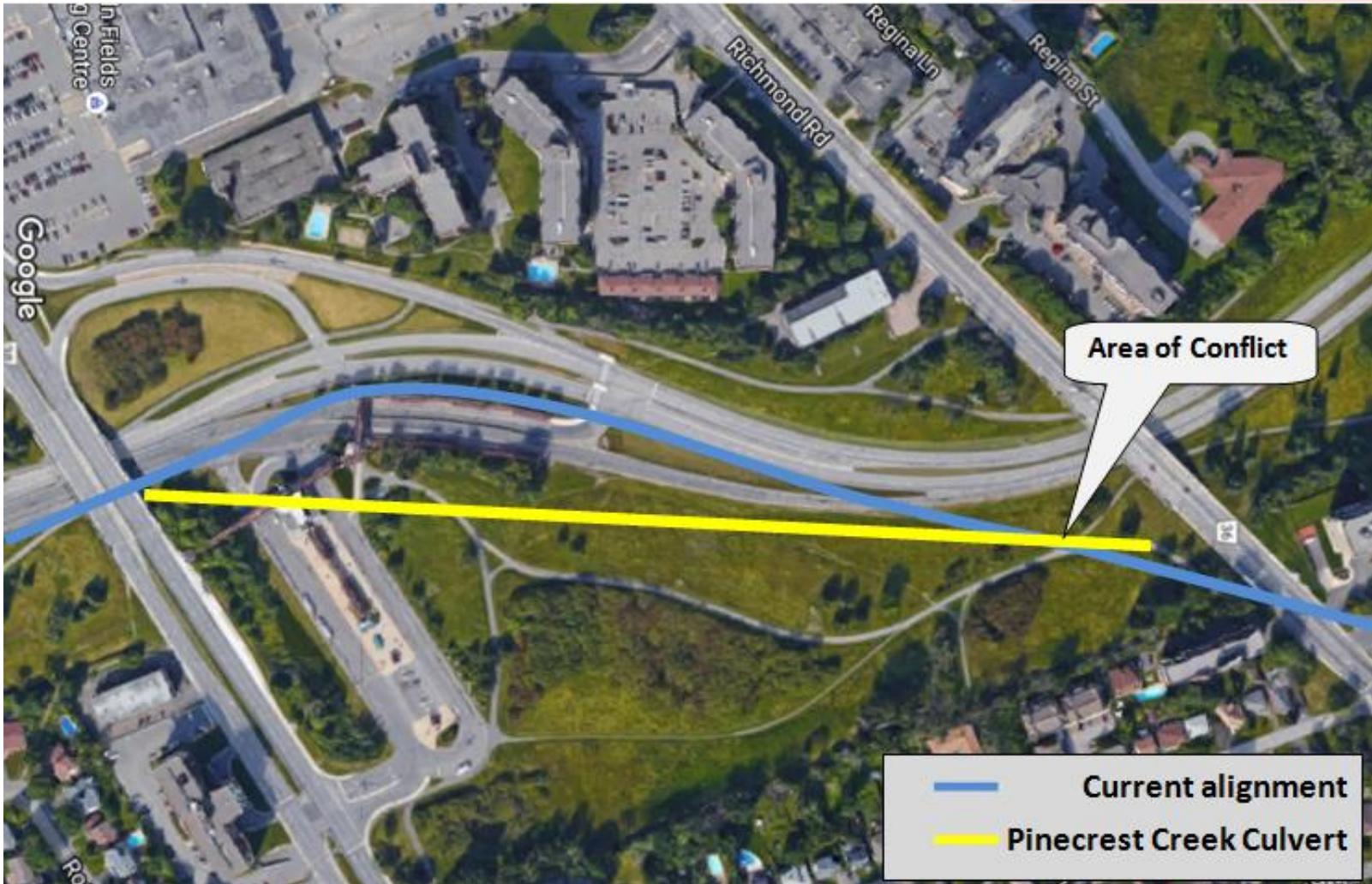
- Spring 2016, design modifications were recommended along Confederation Line West (at Cleary Station) and Confederation Line East (Blair to Montreal stations)
 - ✓ The modifications were included in the respective Confederation Line Environmental Assessments (EAs)
- Preliminary engineering design work has been ongoing and staff identified additional improvements along Confederation Line West:
 - Alignment and station shift at Lincoln Fields
 - Alignment shift, between Cleary and Woodroffe



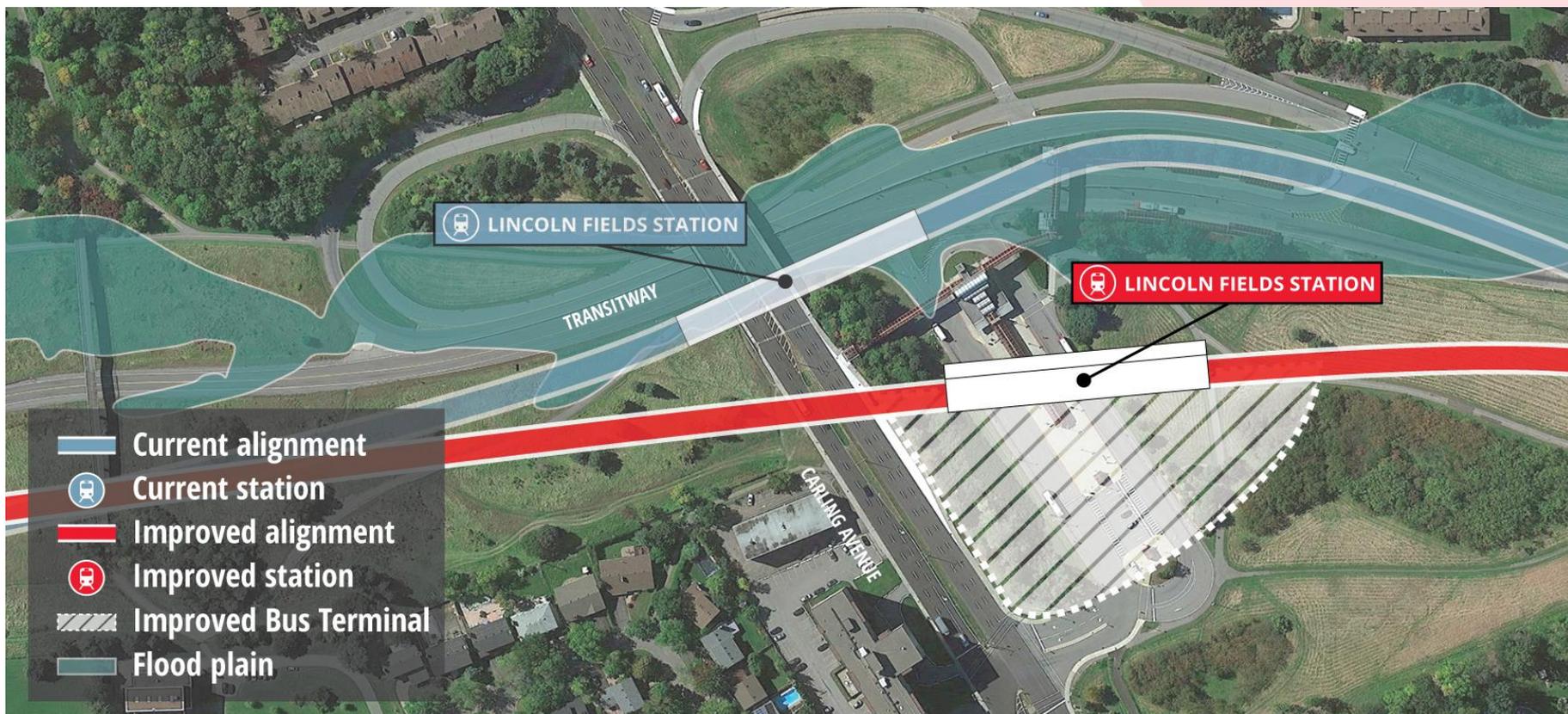
EA Alignment Benefit & Challenges

- Benefits:
 - Utilizes existing infrastructure
- Challenges:
 - Alignment and station located within floodplain of Pinecrest Creek
 - Recommended flood walls do not fully mitigate flood risk to LRT infrastructure and operations and carry higher maintenance costs
 - Alignment constrains future enhancements to/naturalization of valley lands
 - West tunnel portal south of Richmond Road in conflict with Pinecrest Creek culvert to Ottawa River
 - Prevents ability to keep existing Transitway in operation during construction

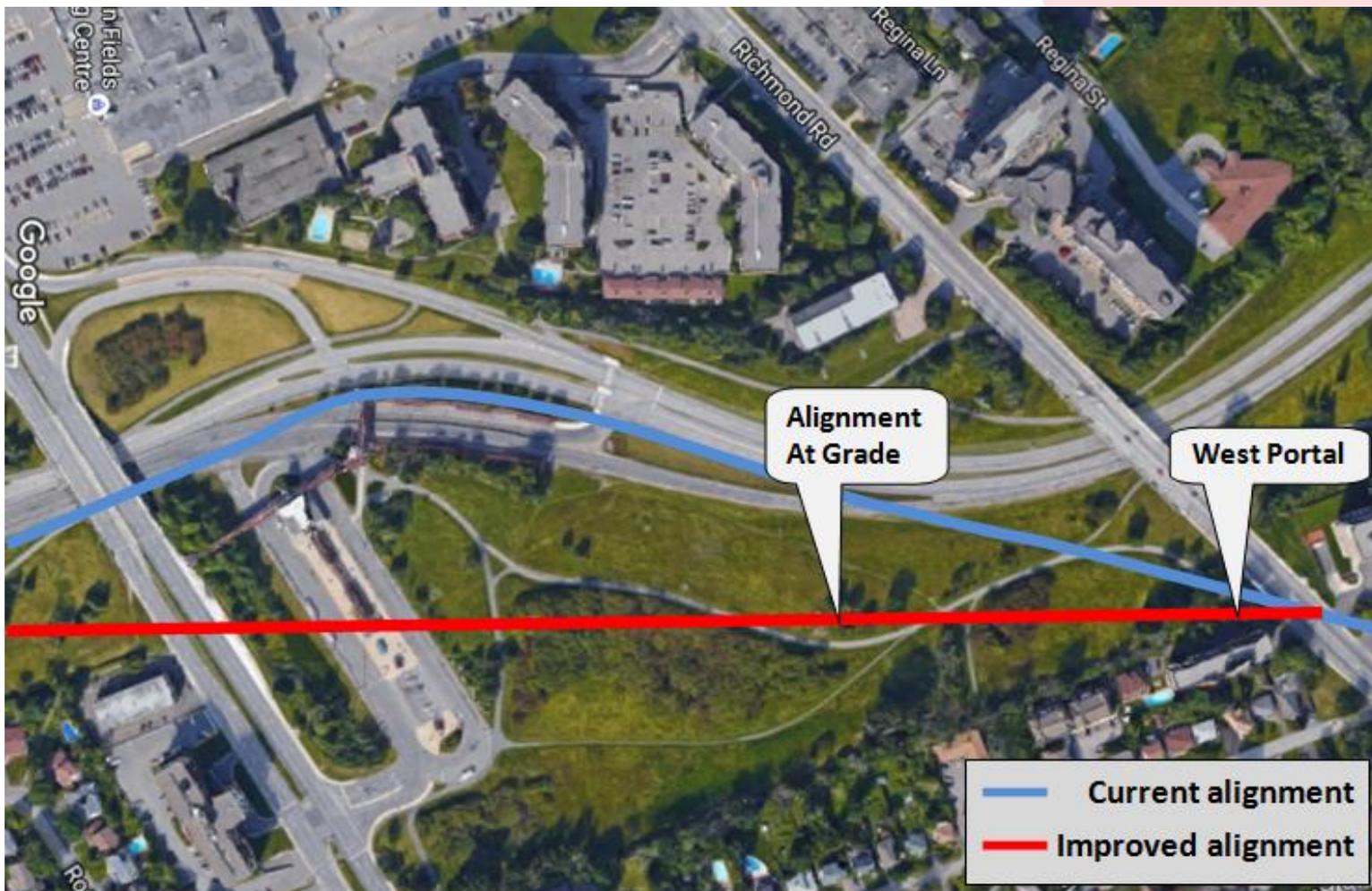
Conflict with Pinecrest Creek Culvert



Lincoln Fields Improved Alignment



Lincoln Fields Improved Alignment



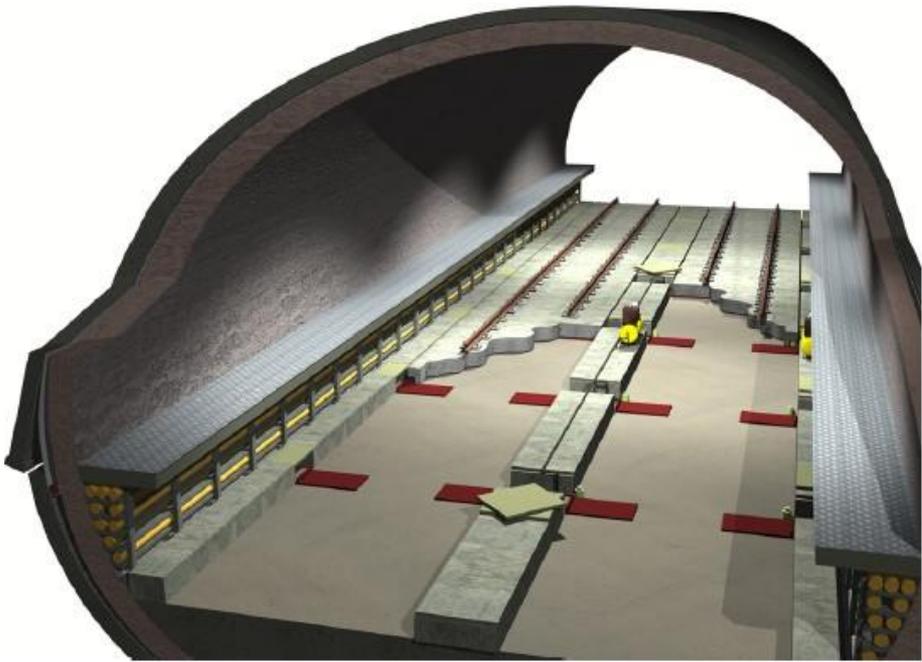
Improved Alignment Benefits

- Alignment completely avoids LRT flood risk (with minor berming)
- Straighter alignment reduces maintenance and risk of noise and vibration
- Existing Transitway can be returned to NCC for future enhancements
- Avoids conflict with Pinecrest Creek culvert at West Portal (LRT is beside the culvert)
- New Lincoln Fields LRT Station integrated with new 'fare-paid' bus terminal
- Similar capital cost, with significantly reduced flood risks and reduced infrastructure (concrete flood walls)
- Maintains Transitway operations during construction

Improved Alignment Impacts

- New tunnel required under Carling Avenue
 - Traffic impacts on Carling Avenue
 - Utility relocations required
- New integrated bus terminal requires some tree removals
 - 2:1 replacement policy will be implemented
- Increased proximity to adjacent residential properties
 - Noise levels meet City Standards
 - Rail based vibration can be mitigated with track bed system
 - Use of resilient track fasteners
- New floating slab (100 metre section) along Richmond Avenue

Vibration Mitigation Measures

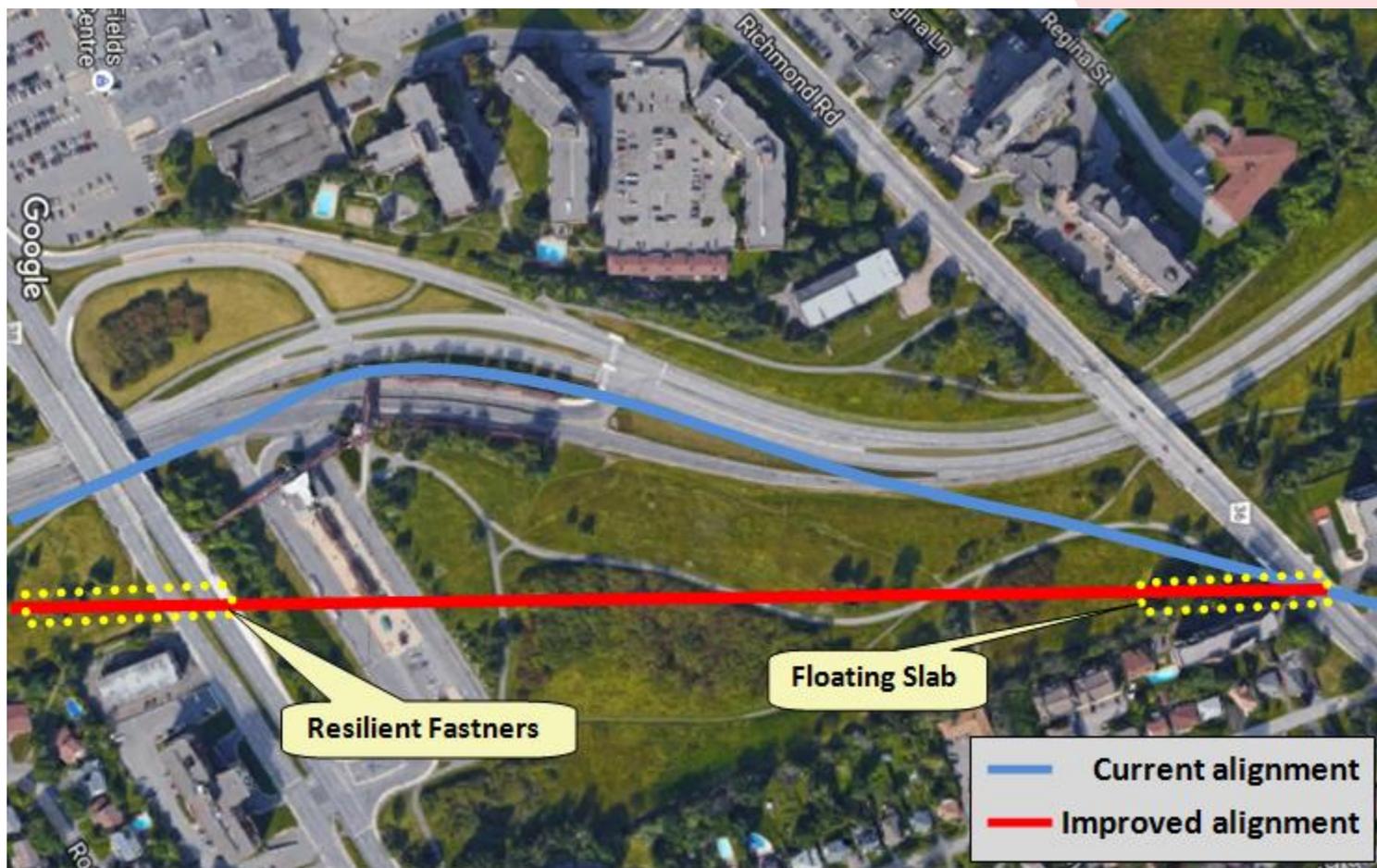


Floating Slab

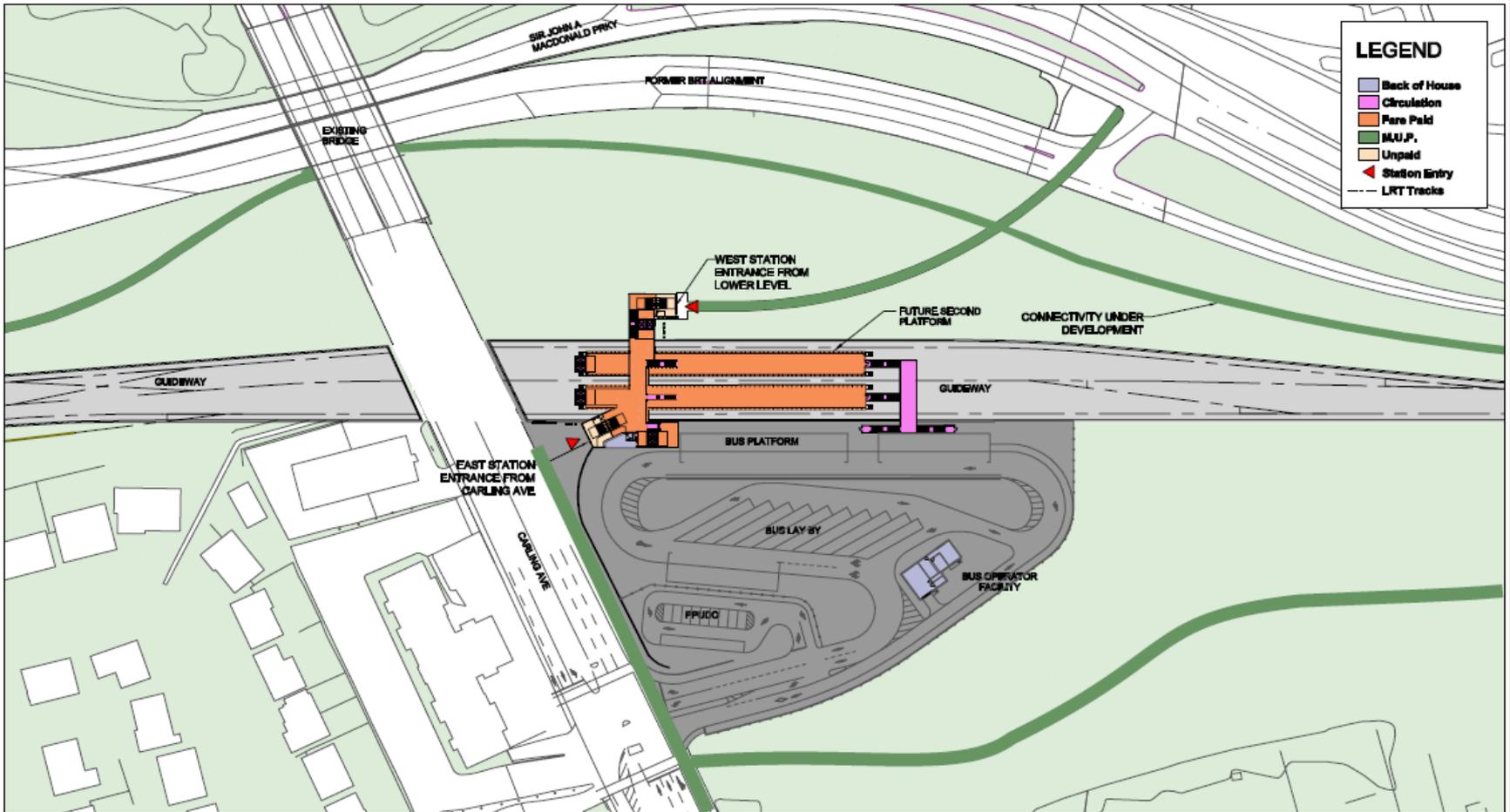


Resilient Fastener

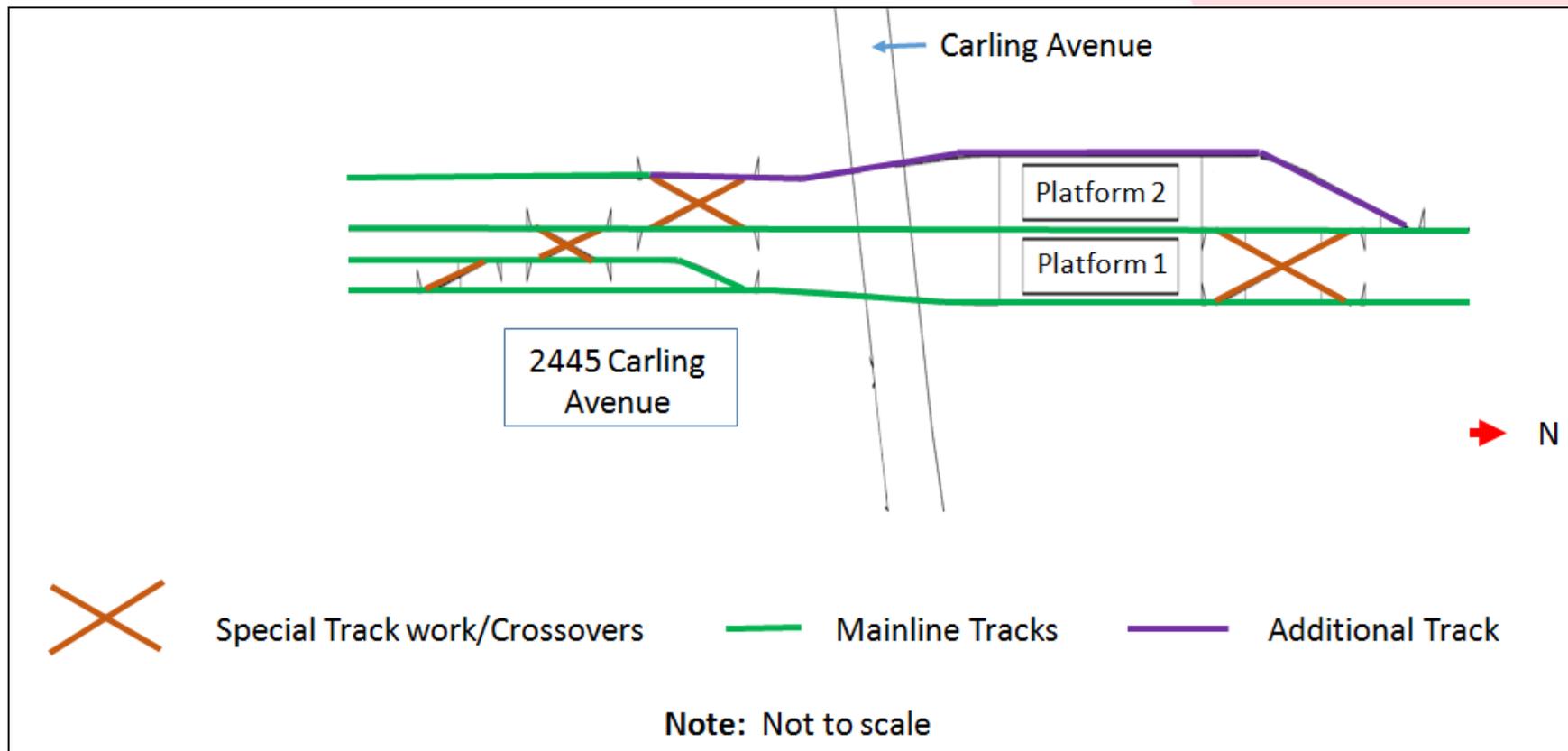
Mitigation Locations South of Carling & West Portal



Lincoln Fields Station Improved Concept



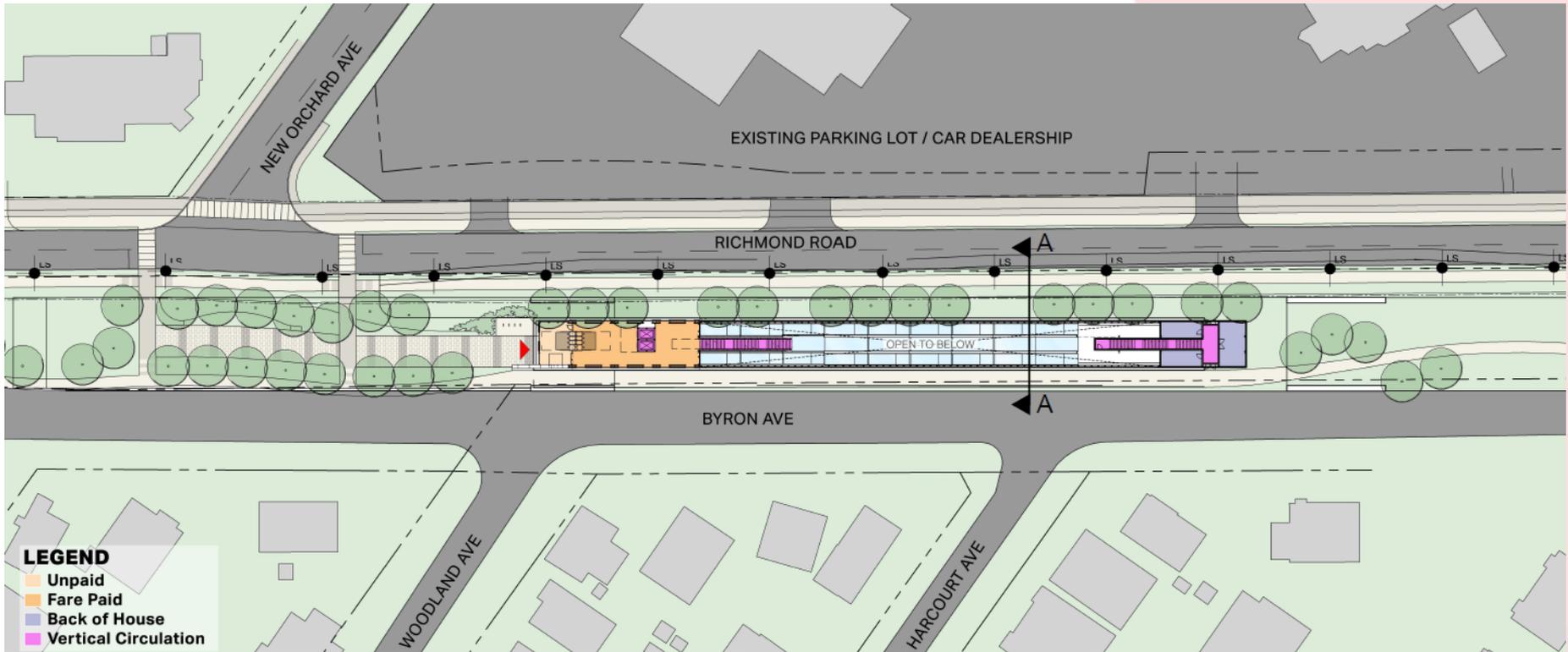
Lincoln Fields Station Improved Concept Platform Configuration



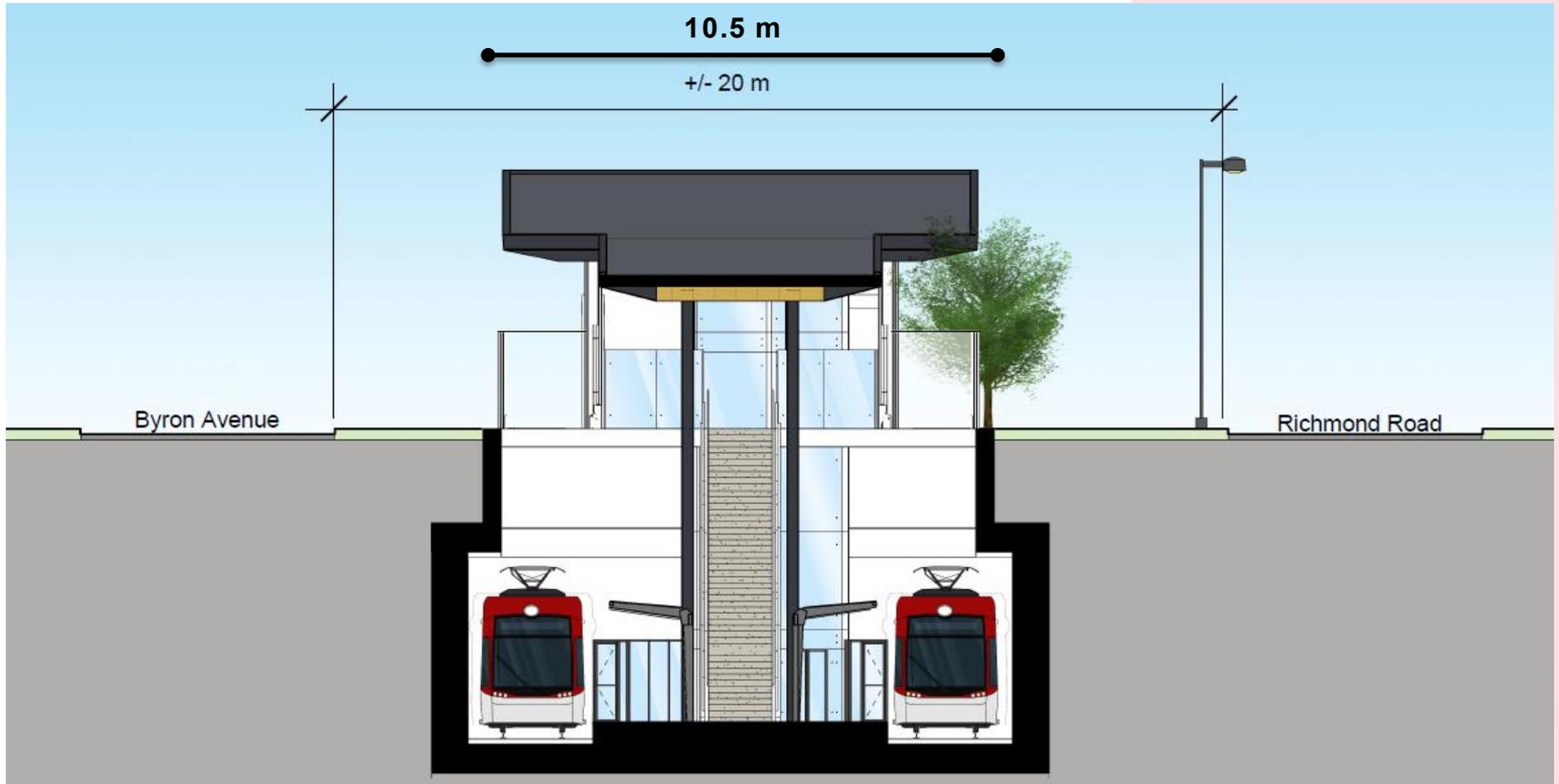
West of Woodroffe LRT Alignment



New Orchard Station



New Orchard Station



New Orchard Station

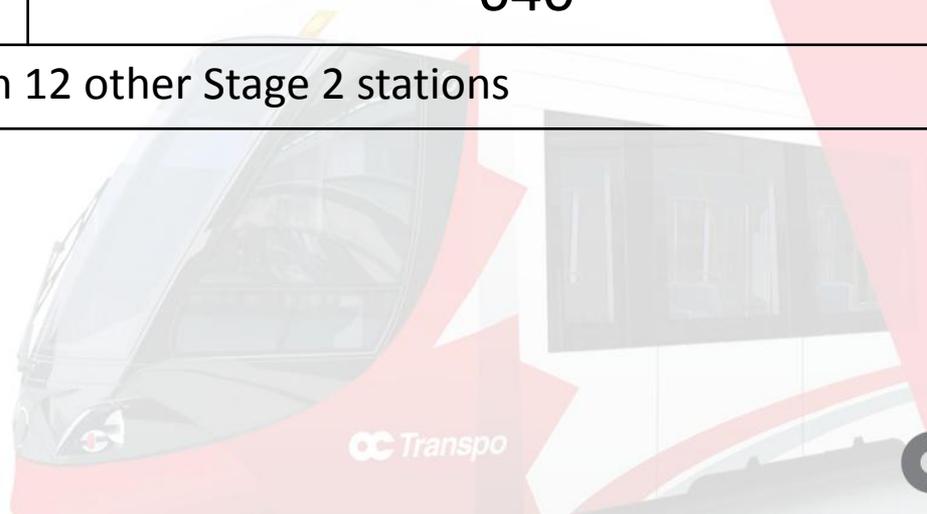


New Orchard Station



Forecasted Ridership

Station	Total Boardings and Alightings (2031, AM Peak Hour)
New Orchard	636*
Lincoln Fields	2,521
Queensview	540
Pinecrest	640
*New Orchard Station is busier than 12 other Stage 2 stations	



Richmond Complete Streets/ Byron Linear Park Themes



Richmond Complete Streets/ Byron Linear Park Themes



Next Steps

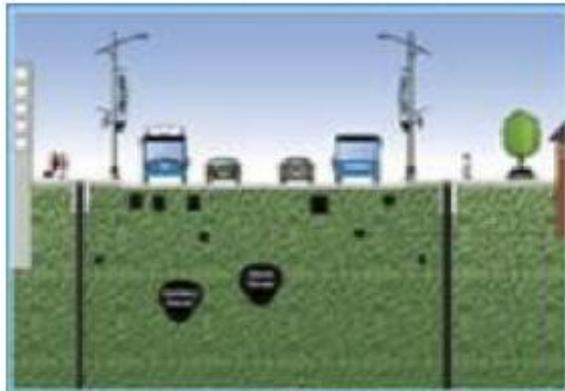
- Upcoming opportunities for public comment:
 - Environmental Assessment process
 - Notice of Completion (September 30, 2016)
 - Staff report outlining recommended design improvements:
 - Finance and Economic Development Committee (Fall 2016)
 - City Council (Fall 2016)



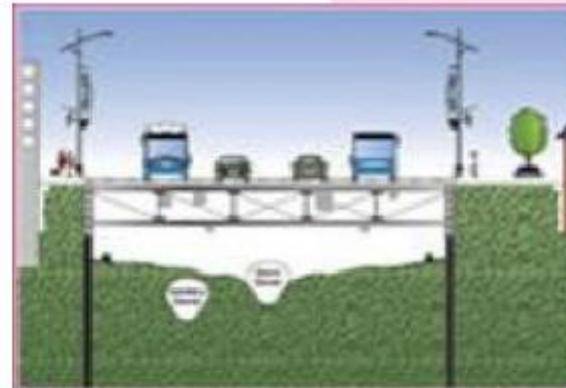
Questions?



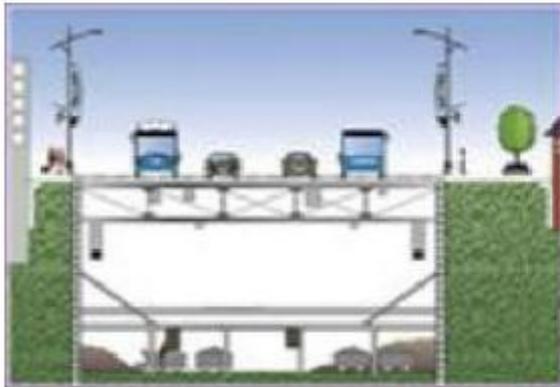
Cut and Cover Decking



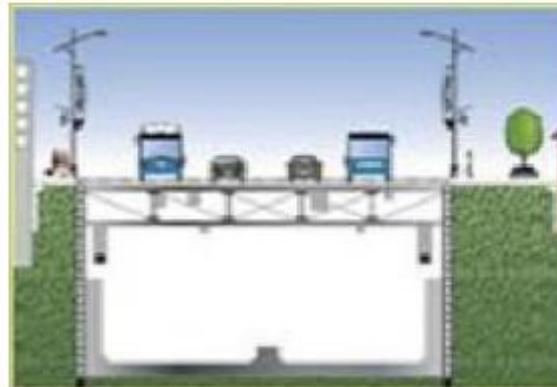
1. Utility location and piling



2. Installation of decking



3. Excavation and soil removal



4. Construction of underground structure



5. Removal of decking/ street restoration

Connectivity Study Cleary Station



Connectivity Study New Orchard Station

