

# Confederation West LRT Project— Woodpark Community Issues

March 27, 2017

C.Wheeler/C. Swail

← STAGE  
ETAPE ↓ ② →



# Purpose of Meeting

- Current project status....how did we get to this point of the project?
- Richmond Rd vs Byron Linear park alignment choice
- Overview of LRT alignment, west tunnel portal to Woodroffe Ave
- New Orchard Station
- Lincoln Fields alignment/station:
  - EA alignment challenges/improved alignment benefits
  - Reinstatement of Transitway as a natural environment
- Connectivity/MUP's to serve station areas
- Richmond Rd Complete Streets initiative
- “Bundled” projects that affect the community
- Proposed Lawn Ave Parkette/Woodpark Community Garden
- Construction issues/noise and vibration/stakeholder strategy
- Project implementation/next steps

# *Background...How did project get here ?*

- Spring 2016, an alignment change at Cleary Station was adopted and reflected in EA
- Preliminary engineering identified additional improvements:
  - Alignment and station shift at Lincoln Fields
  - Alignment shift between Cleary and Woodroffe to bring LRT into Byron Park sooner than planned
- Other bundled project improvements have been identified for implementation with LRT project
- Council also authorized proceeding with RFP in June 2017 including bundled community improvements



# Alignment and Station Spacing



**600 Meter Radius Catchment Area**

Station catchment area based on convenient walking distance for transit users to rapid transit stations

# Region Wide Benefits of Stage 2 LRT



110,000 tonnes GHGs  
3,000 tonnes CACs



14,000 cars off the road



\$7.1 billion savings  
in commuting costs



Will generate over 21,000  
person-years of employment

# *Local Benefits of Stage 2 LRT*

- New Orchard Station provide improved rapid transit accessibility
- New integrated LRT/bus terminal at Lincoln Fields
- Reinstatement of Byron Park to an improved condition/improved linear park connectivity/reduced traffic infiltration
- Richmond Rd complete streets will improve pedestrian and cycling environment/safety
- Upgraded sewers in area
- Reinstatement of Transitway to natural condition
- Lawn Ave parkette to be implemented

# *Improved Cleary/Lincoln Field Alignments – Community Consultation*

## **EA Alignment**

- 4 EA Public Meetings in 2014/2015 (Nov. 2010, Apr. 2013, June 2013 and Apr. 2015)
- Functional design approved by Council in July 2015

## **New Alignments(Fall 2016)**

- Cleary, Byron Park, Lincoln Fields and Queensview Public Consultations
- presentations to major buildings(5),other presentations(14), Richmond Rd meetings(3)
- Alignments reflected in revised EA
- 49 objections received, **all** objections responded to MOECC
- EA approved by MOECC in December 2016
- Public delegations at FEDCO February 24, 2017
- Approved by Council on March 8, 2017



# Forecasted Ridership

Station	Total Boardings and Alightings (2031, AM Peak Hour)
Lincoln Fields	2,646
New Orchard	756
Cleary	1,242



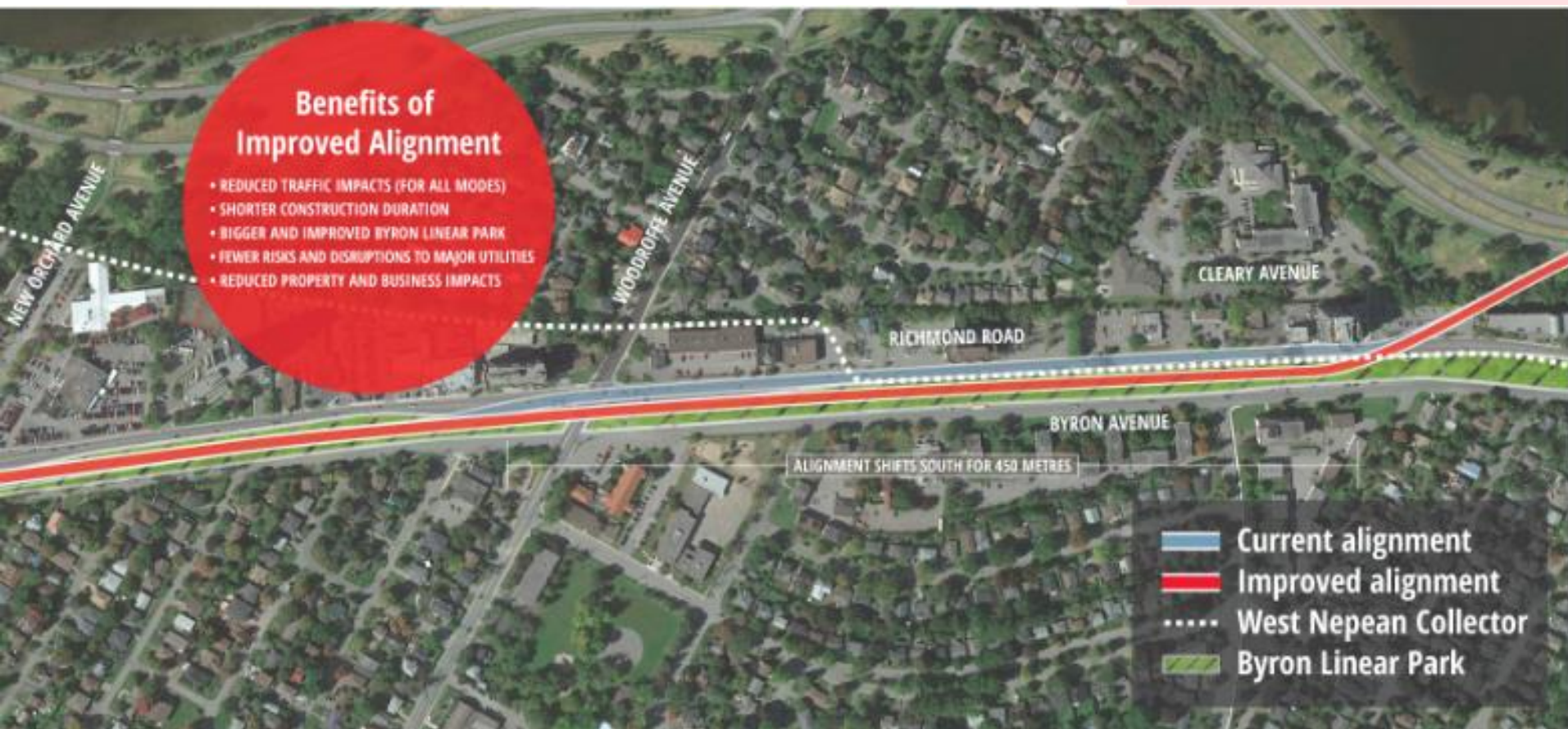


# Richmond Road Alignment Improvement





# Benefits of Byron Park Alignment



# Byron Park Reinstatement Commitments

- Woodroffe to Pinecrest Creek corridor was always in park
- Even with a Richmond Road tunnel alignment between Cleary/Woodroffe, 50% of trees in Byron Park would not survive tunnel construction
- Moving the tunnel construction into the park:
  - City commits to enhanced park restoration
  - \$4M **dedicated** budget for tree replacement in addition to budget for McEwan to Woodroffe
  - \$1M **dedicated** art budget
  - A significant opportunity to reinstate a better park in full consultation with the community
  - Even with New Orchard Station footprint, size of park remains the same due to other enlargement areas
  - An opportunity to reduce traffic infiltration



# Proposed Intersection Modifications



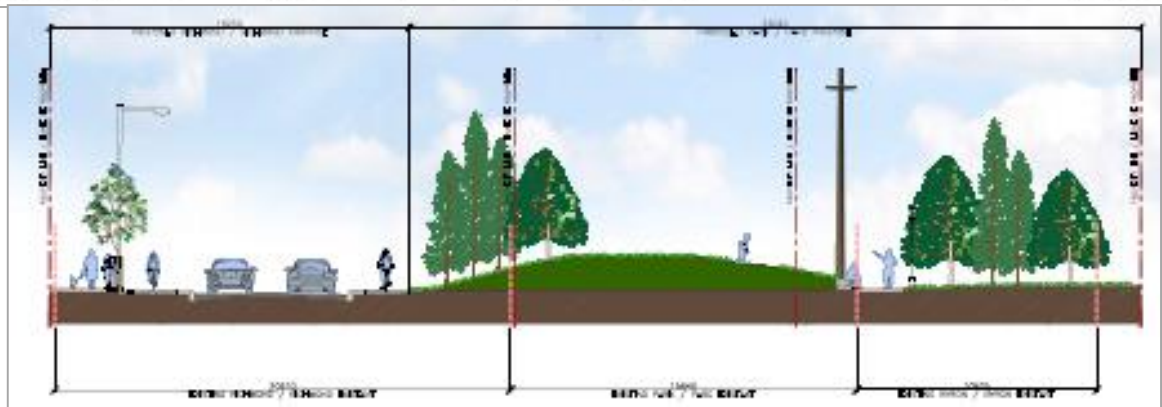
- New park crossing at Allison/Richmond
- New PXO at Lockhart and Richardson
- Closure of Redwood, Ancaster and Richardson
- Closure of Byron at Woodroffe
- Potential closure of Hartleigh exit onto Richmond
- Benefit- Reduced traffic infiltration, enhanced park connectivity, improved pedestrian safety

# Byron Linear Park Enhanced Concept





# Byron Linear Park Enhanced Concept



# Byron Linear Park Enhanced Concept







# Ottawa Richmond Road Complete Street



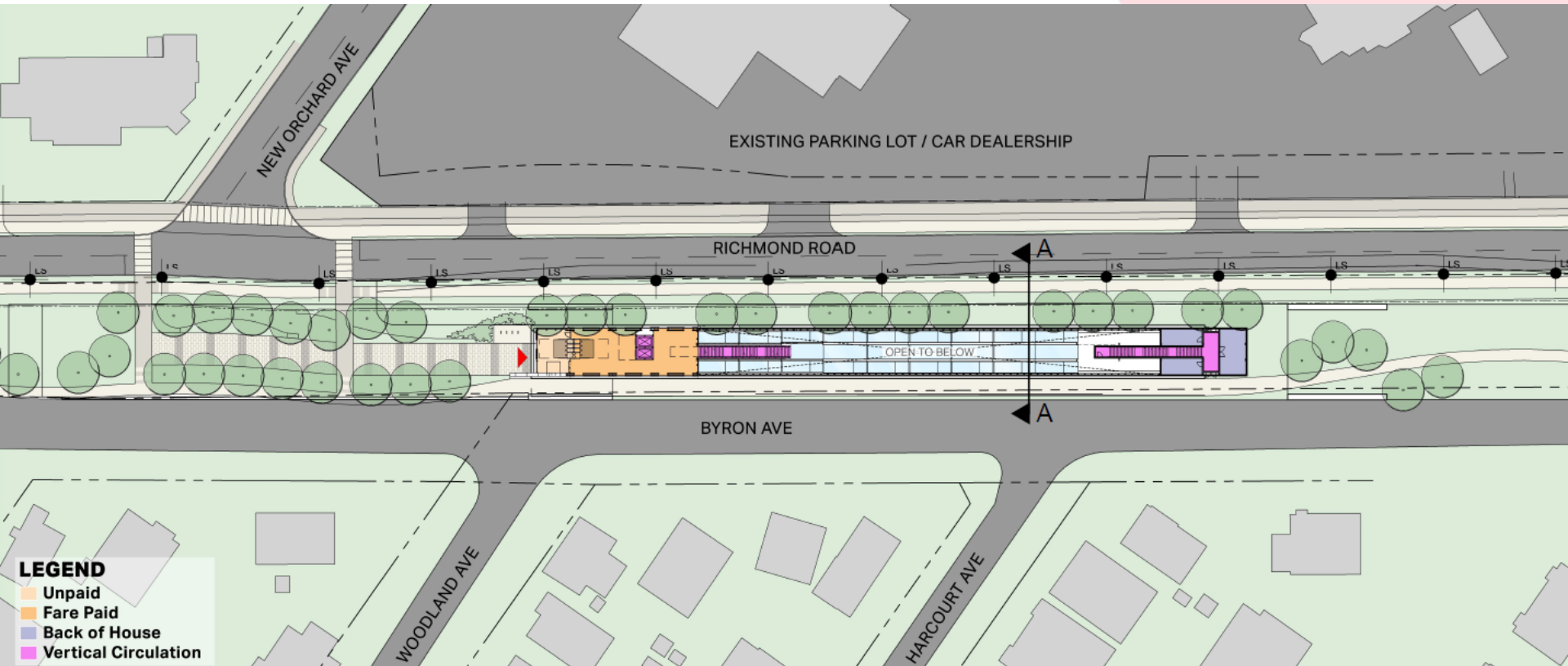


# Connectivity Study New Orchard Station



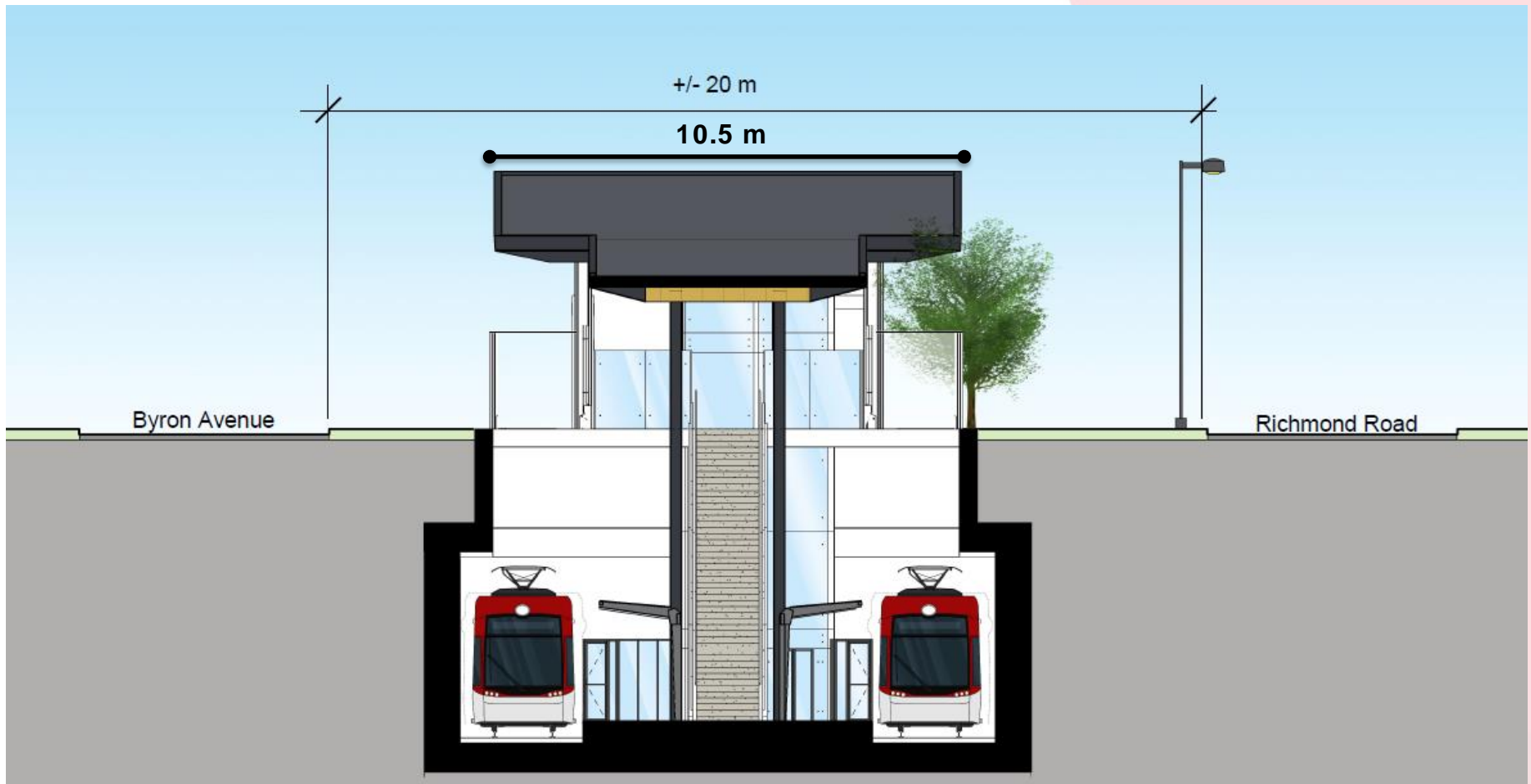


# New Orchard Station



- LEGEND**
- Unpaid
  - Fare Paid
  - Back of House
  - Vertical Circulation

# New Orchard Station



- Minimize station footprint at grade
- MUPs/landscaping on either side

# New Orchard Station



# New Orchard Station



# *Storm/Sanitary Sewer Work on Byron Avenue-West*

- Sanitary sewers from Richardson Avenue to Ancaster Avenue including partial reconstruction on select residential roads.
- Sanitary sewers from Compton Avenue to Sherbourne Road.
- Storm sewers in the intersections of Richmond Road, Byron Avenue and Woodroffe Avenue



# Storm and Sanitary Reconstruction on Byron Avenue-West

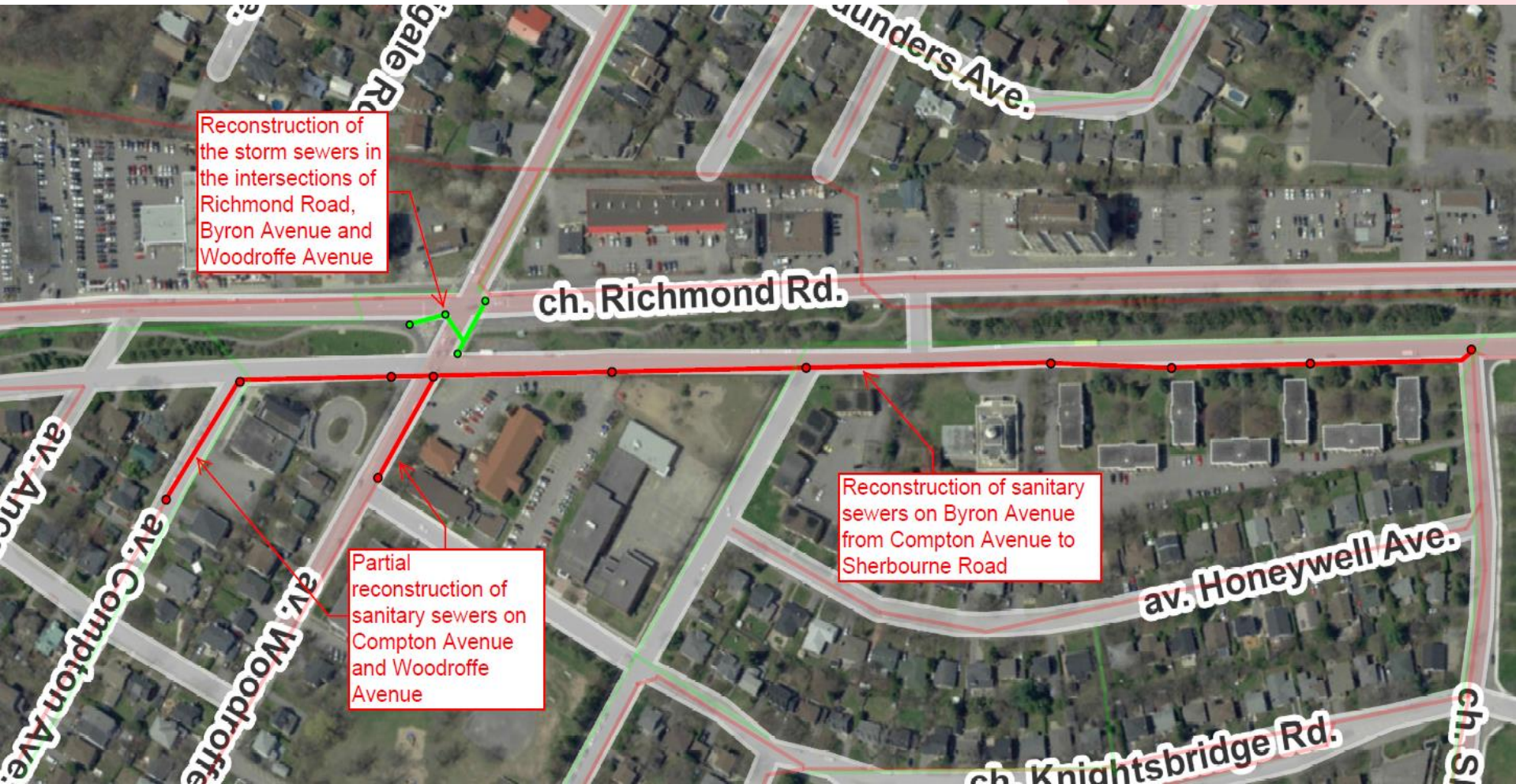


# *Storm and Sanitary Reconstruction on Byron Avenue-East*

- Reconstruction of the sanitary sewers from Richardson Avenue to Ancaster Avenue including partial reconstruction on select residential roads.
- Reconstruction of the sanitary sewers from Compton Ave to Sherbourne Road including partial reconstruction on select residential roads.
- Reconstruction of the storm sewers in the intersections of Richmond Road, Byron Avenue and Woodroffe Avenue.

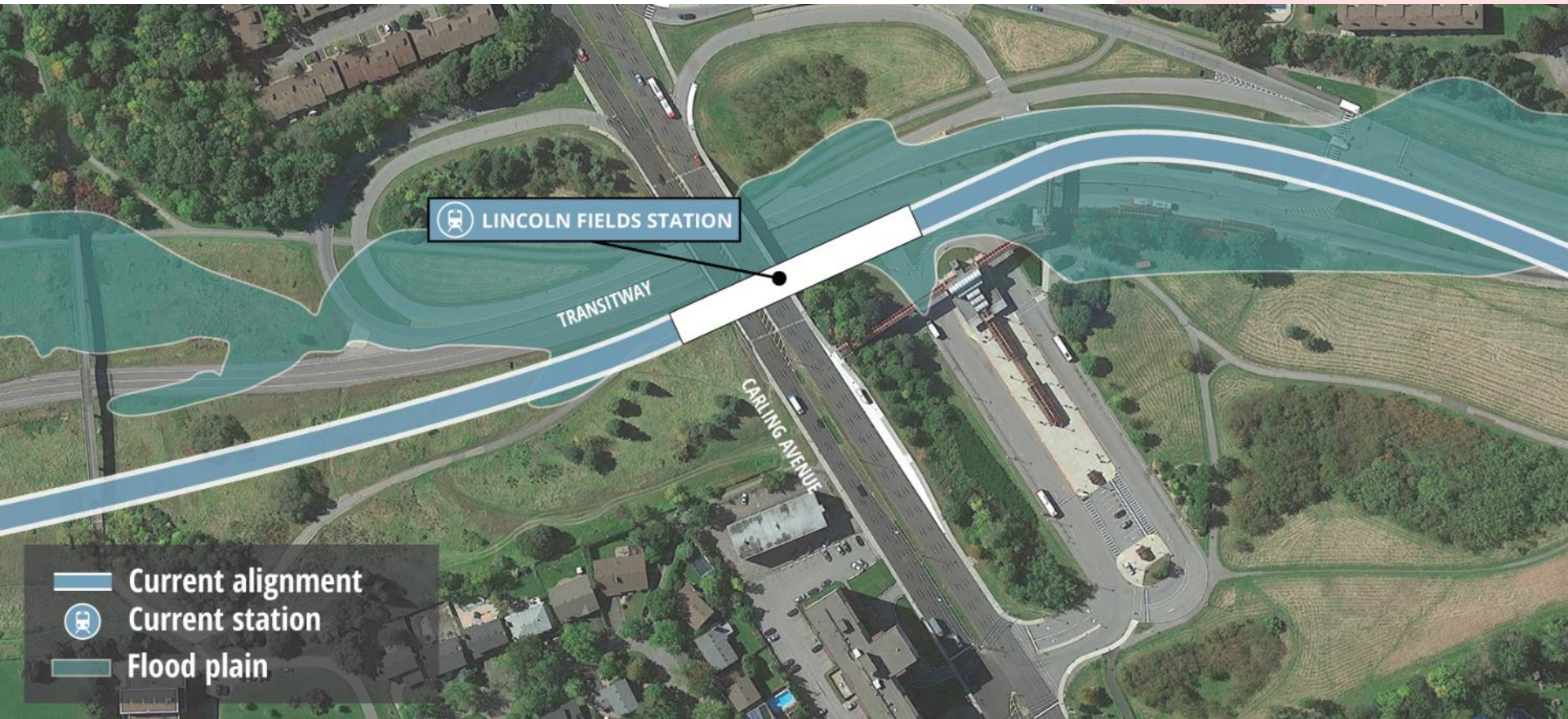


# Storm and Sanitary Reconstruction on Byron Avenue-West





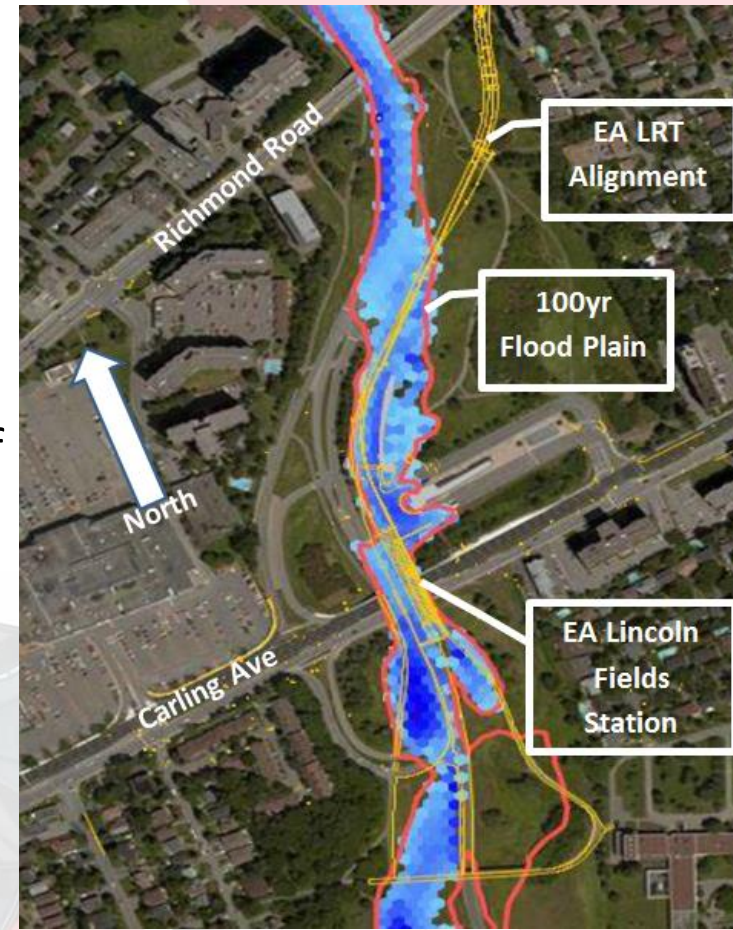
# Lincoln Fields EA Alignment





# Lincoln Fields EA Alignment: Implementation Challenges

- Alignment/station located within floodplain of Pinecrest Creek
- Extensive flood walls to ensure LRT can operate
- Flood walls not supported by NCC due to increased depth/duration of SJAMP flooding
- Flood walls do not fully mitigate flood risk to LRT operations
- EA alignment constrains future reinstatement of valley lands to natural condition
- West tunnel portal south of Richmond Road in conflicts with Pinecrest Creek Culvert to Ottawa River (ORPP)
- Transitway cannot remain open during LRT construction



**Preferred Solution:** Move LRT alignment out of floodplain and avoid flood risks



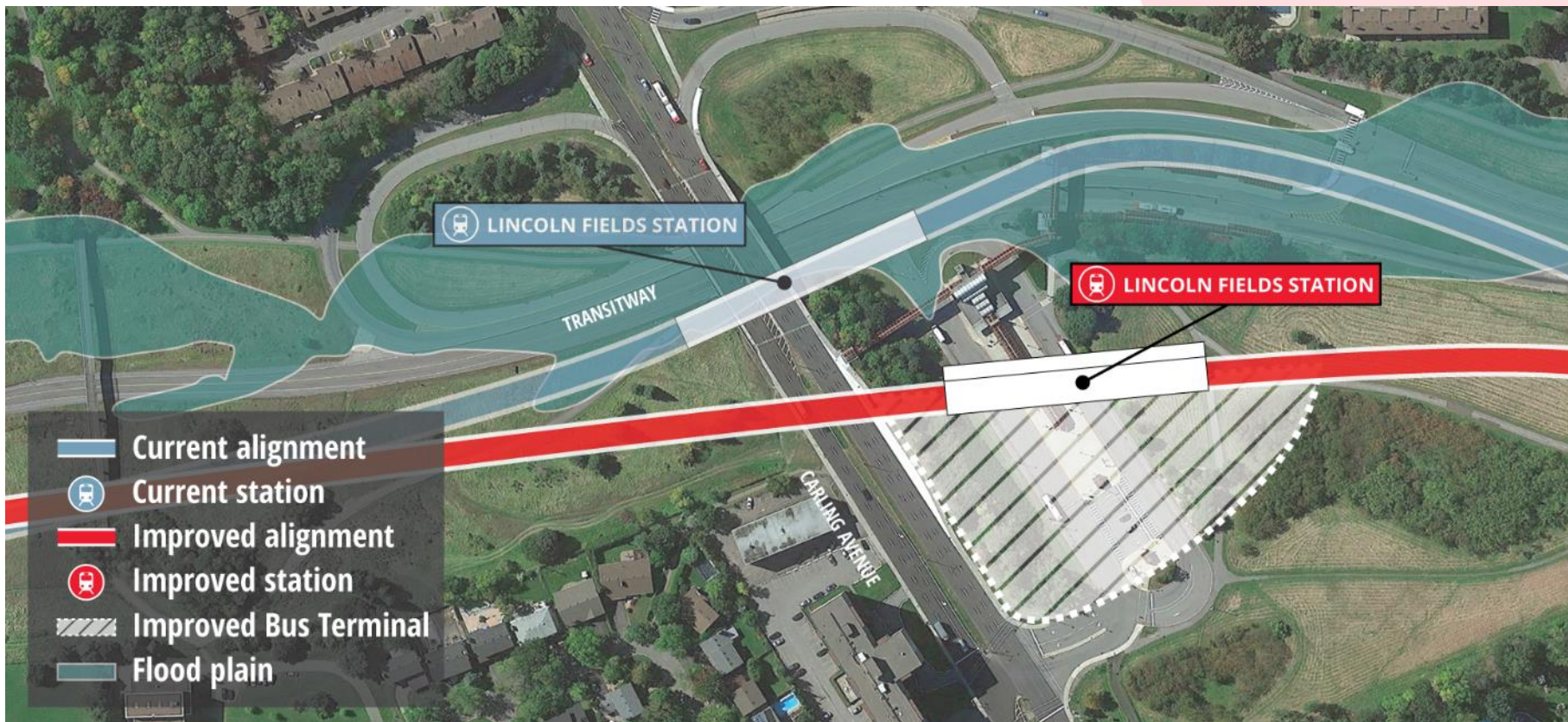
# Alternative Recommended Lincoln Fields Alignment

## Solution:

- Move alignment 15-30 metres east out of floodplain/east tunnel portal **largely unchanged**
- Advantages of alternative alignment:
  - Completely avoids risks to LRT from flooding of Pinecrest Creek
  - Straighter alignment/fewer curves
  - Valley lands can be returned to NCC for future enhancement
- Disadvantages:
  - Utility conflicts with LRT bridge under Carling
  - Closer proximity to 2445 Carling Avenue and 6 residential homes
  - Some tree removals for revised bus terminal

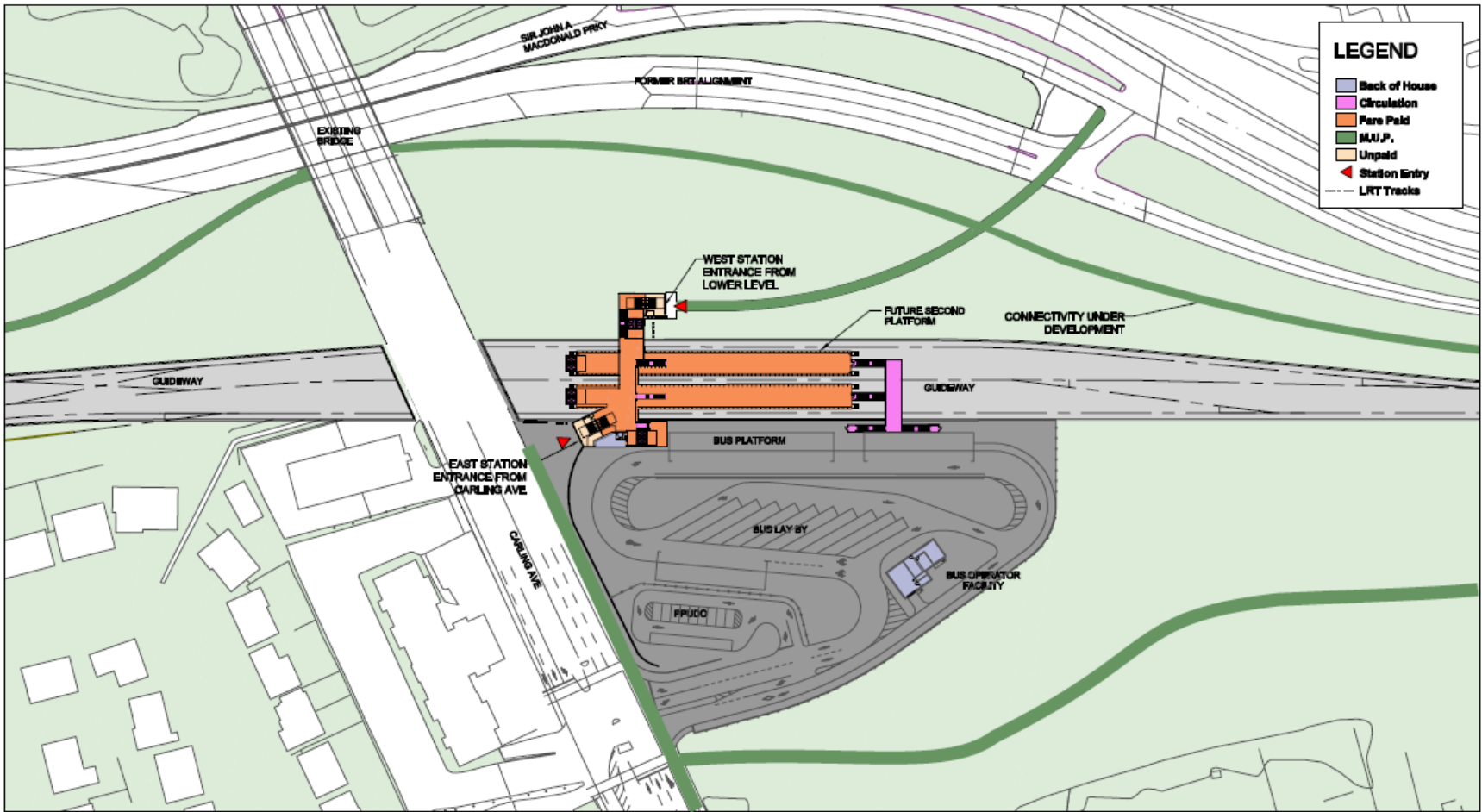


# Lincoln Fields Improved Alignment





# Lincoln Fields Station Improved Concept





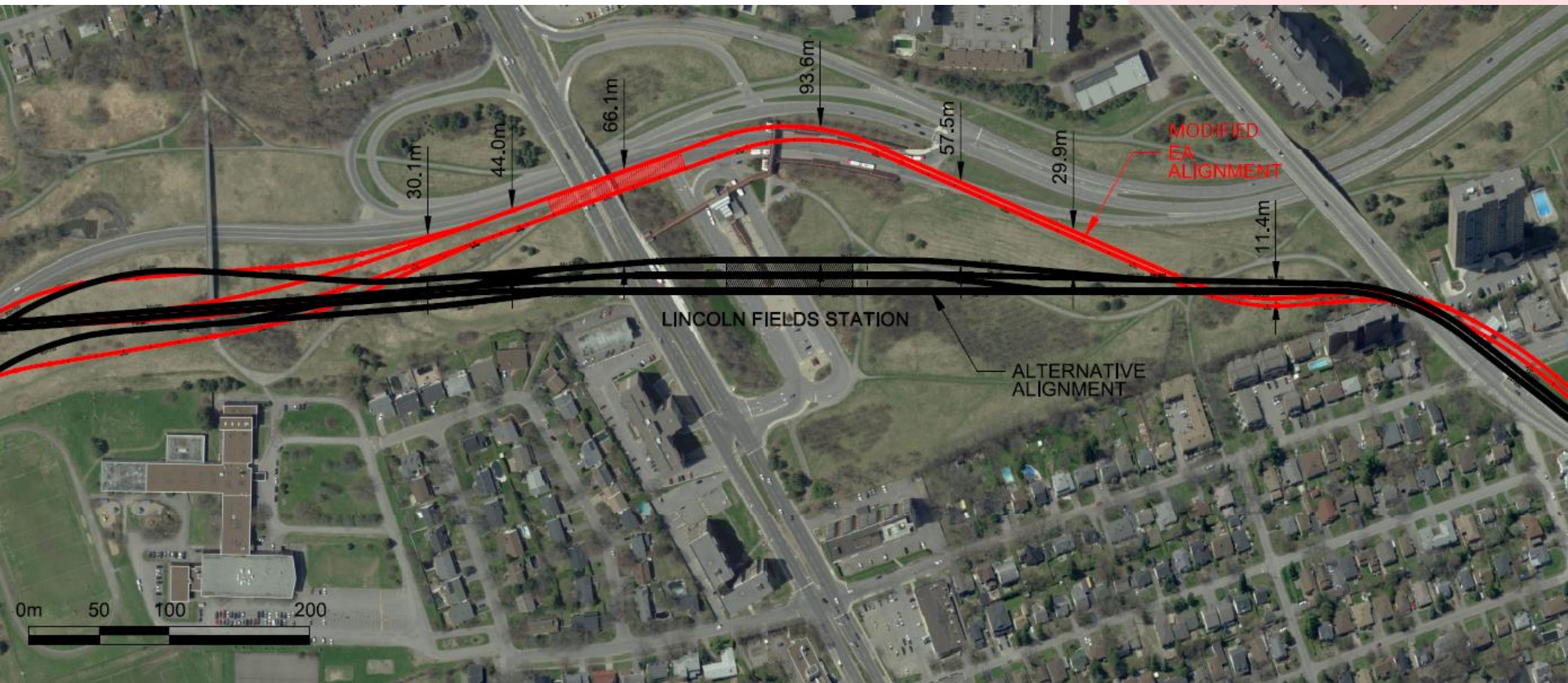
# *Improved Alignment- Benefits*

- Alignment completely avoids LRT flood risk
- Straighter alignment reduces maintenance and risk of noise and vibration
- Existing Transitway can be returned to NCC for reinstatement to natural condition
- New Lincoln Fields LRT station integrated with 'fare-paid' bus terminal
- Similar capital cost, with significantly reduced flood risks and reduced infrastructure (no flood walls)
- Maintains Transitway operations during construction

# *Improved Alignment- Community Implications*

- New tunnel required under Carling Avenue:
  - Traffic staging on Carling Avenue
  - Some utility relocations required
- New integrated bus terminal is oriented north-south/loss of trees
- Increased proximity to adjacent residential properties/lights on front of trains

# Comparison of EA and New Alignment at West Tunnel Portal





# Alignment Proximity/Depth South of Carling Avenue









# Images of Lincoln Fields Alignment





# Ottawa *Images of Lincoln Fields Alignment*



# Lincoln Fields-New Pedestrian Crosswalk





# Lincoln Fields Alignment-MUP's Near West Tunnel Portal

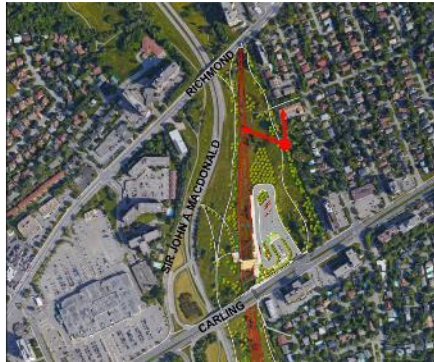
VIEW FROM  
1.8M HT





# Lincoln Fields Alignment-MUP's Near West Tunnel Portal

VIEW FROM  
1.8M HT





# *Lincoln Fields New Alignment – Other Community Issues*

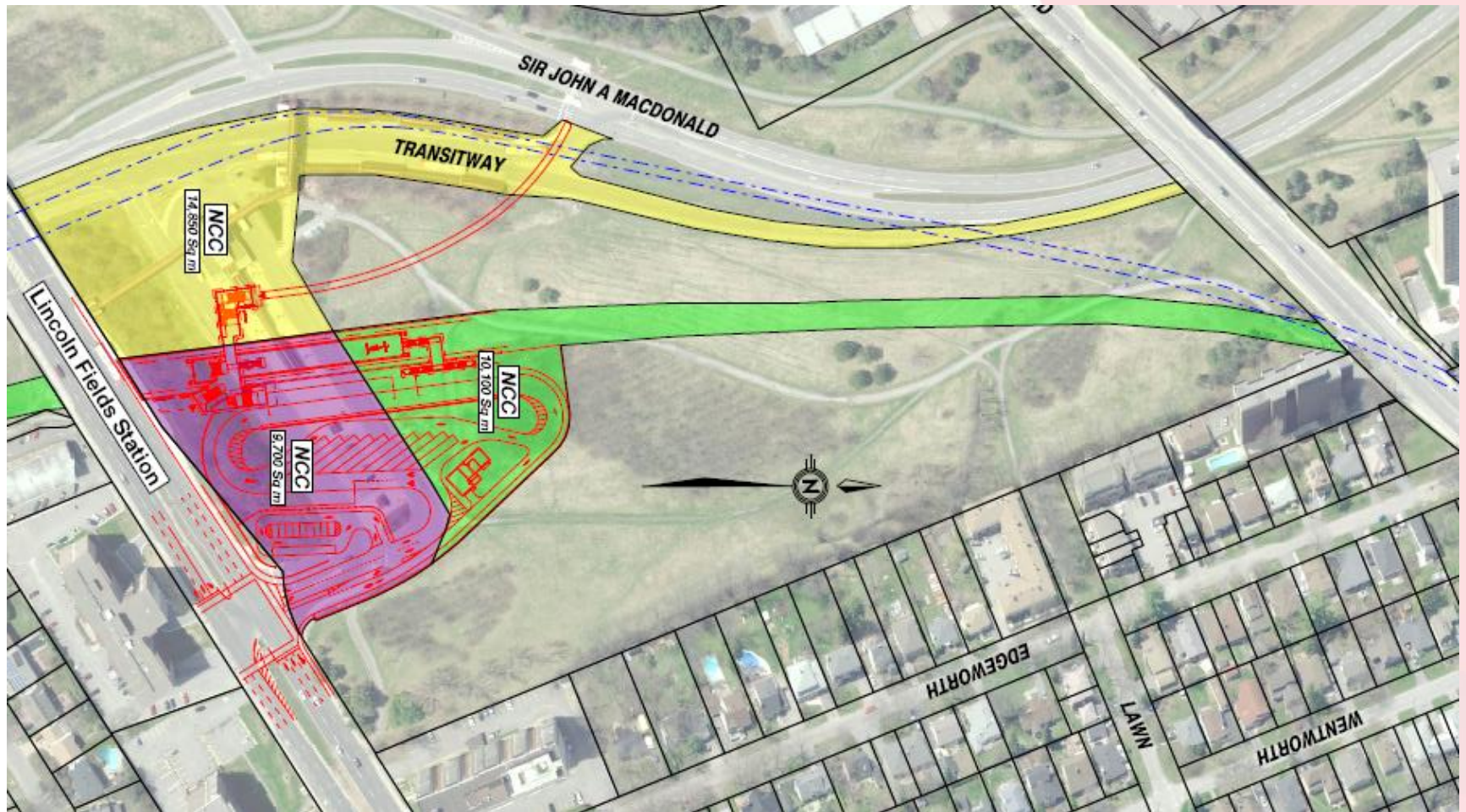
- Compensation for loss of apple orchard trees
- Connectivity, traffic, public safety
- Noise and vibration from trains/buses
- Visual impact of LRT structures over Transitway/Pinecrest Creek
- Land in park occupied by new alignment
- Reinstatement concept for Transitway lands
- Woodpark Community Garden
- Impacts during construction

# *Reinstatement of Transitway Lands to a Natural State*

- New alignment allows former Pinecrest Creek valley (where Transitway is) to be landscaped
- Will act as a low flow channel for some storm events
- Re-naturalizes the valley integrated with MUP's/SJAM/Station
- Land area to be landscaped equal to area occupied by new alignment



# Lincoln Fields Improved Alignment

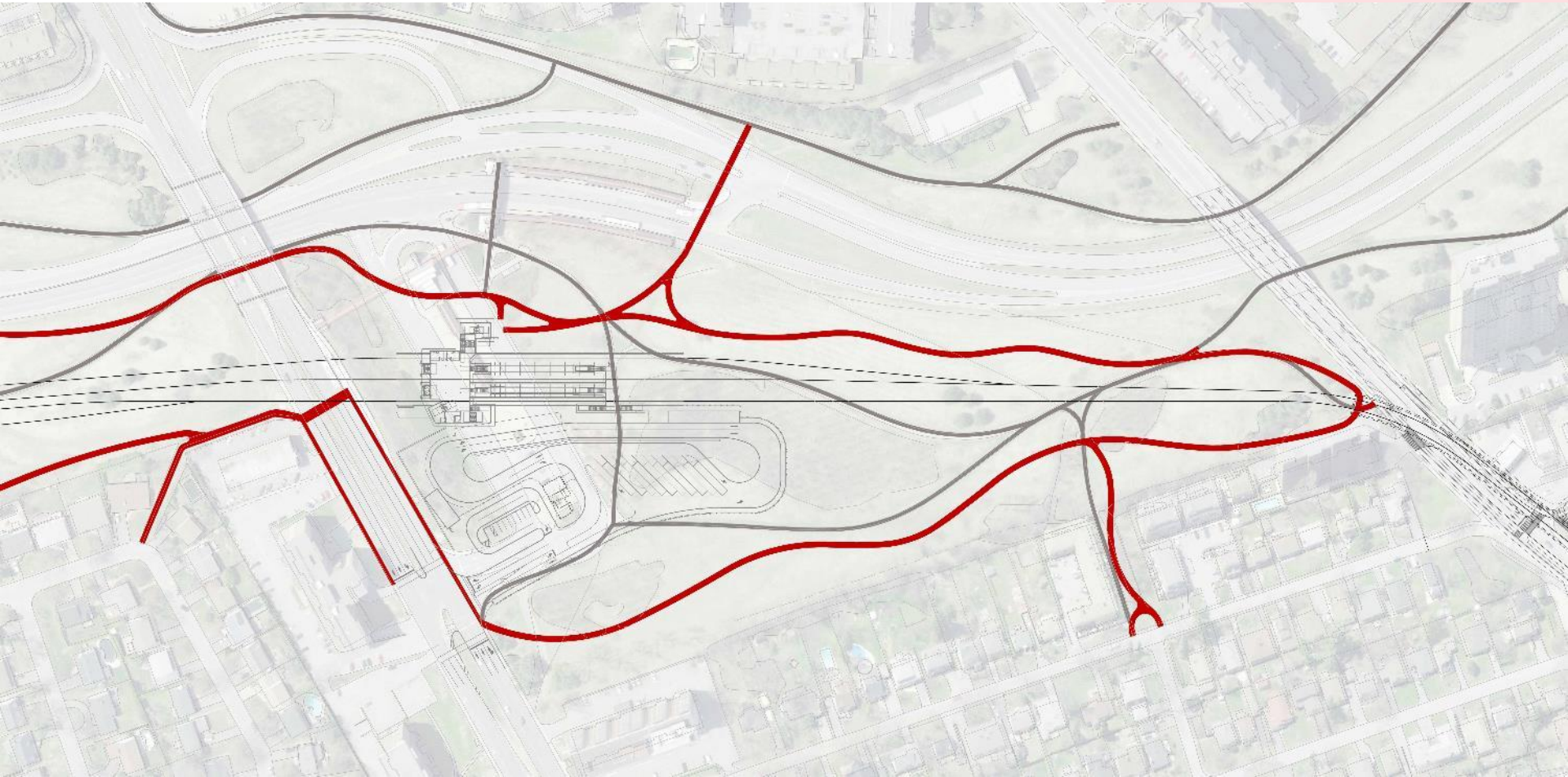








# Comparison of Existing and New MUP Connectivity



# Mitigation of Construction

CONSTRUCTION ISSUE	MITIGATION STRATEGY
Construction dust	Dust suppression strategy to be implemented
Mobilization site impacts	Detailed strategy developed, site offices and parking pushed away from homes
Utility interruptions	Bundle related projects, notices of planned utility work, schedule utility work in off peak periods
Traffic impacts	Detailed strategy to be submitted/approved by City contract, decking of Richmond/Carling
Noise	Must meet construction/operational noise levels, City noise bylaw, noise wall on east side of bus terminal
Vibration	Must meet contract specifications, special trackbed solution in key areas
Loss of Trees	2:1 replacement policy
Land required for new alignment	No change in net park space, existing Transitway to be re-naturalized
Visual Impacts	Additional tree planting/berms/fences with vines



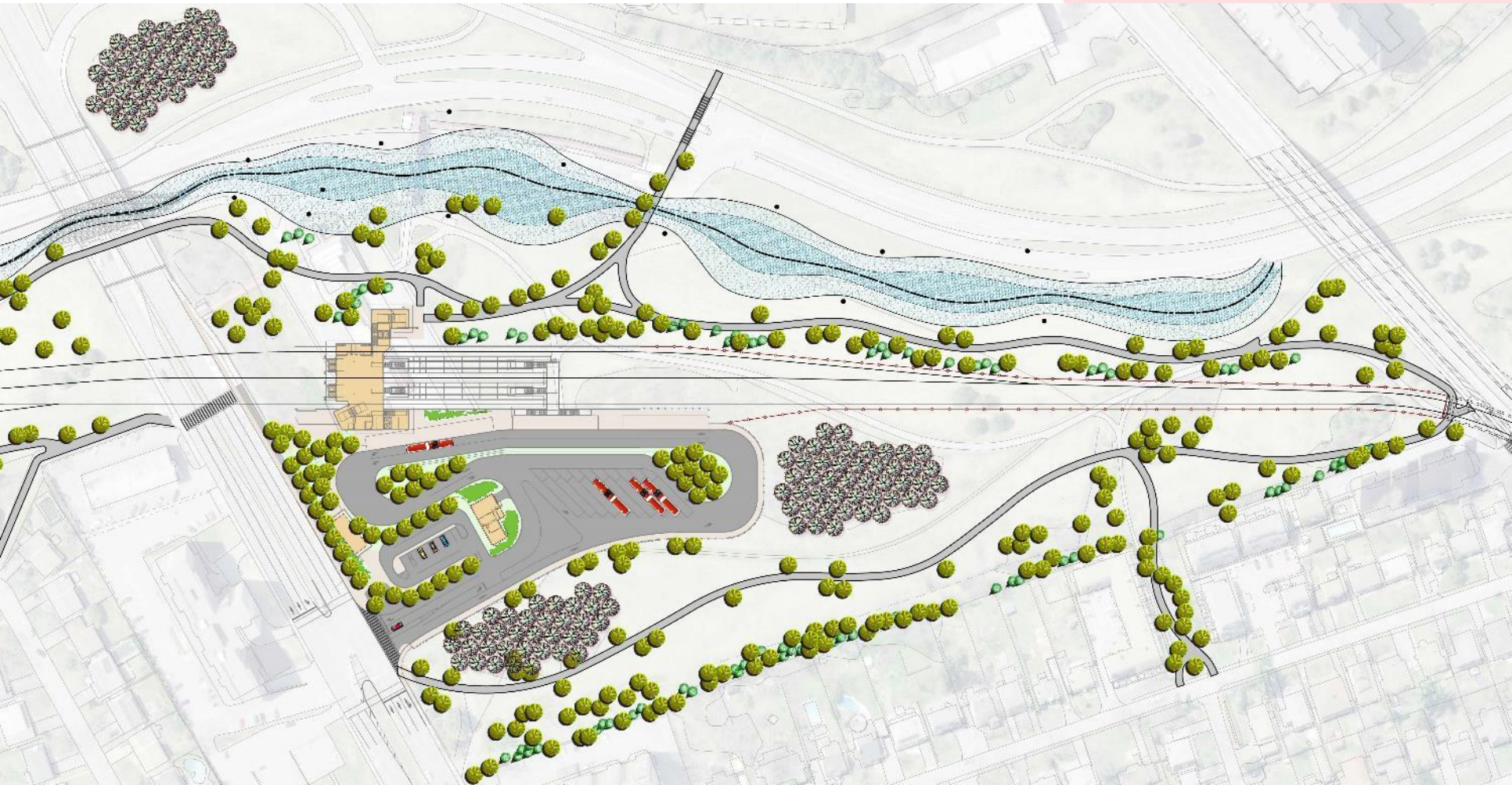
# *Tree Replacement*

- Transplant Byron trees to NCC green space not affected by LRT construction
- Inventory undertaken of all trees potentially impacted by construction
- For every tree removed, two trees will be planted
- With new alignment/bus terminal, some loss of apple trees cannot be avoided
- Apple tree orchard reduced in size by approximately 20-30 % (to be confirmed)
- Other areas in valley available for new trees





# Where would you like to see new tree plantings?



# Existing Traffic Conditions

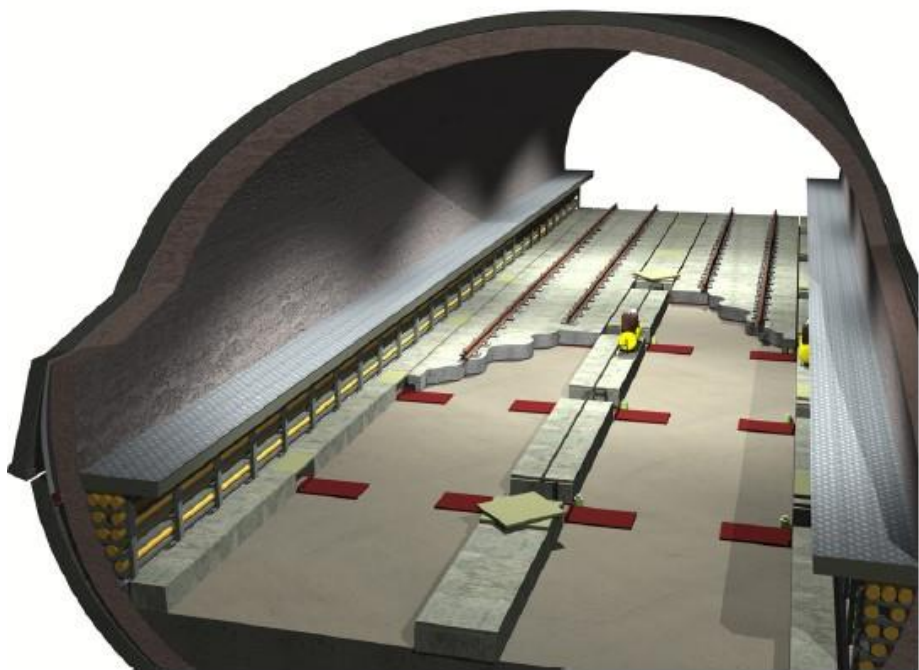
- General traffic conditions in the area are being monitored (counts/cameras)
- Woodroffe/SJAMP is the major traffic draw
- New crosswalks at Lockhart/Richardson will improve pedestrian safety to cross Richmond Rd
- Recent traffic counts in area show typical City wide growth rates
- Traffic infiltration south of Byron to be addressed by Byron Park changes:
  - Closure of streets with connection to Carling
  - Open Allison Avenue thru park which does not connect to Carling



# *Traffic Impacts During Construction*

- Cut and cover construction required for tunnel under Richmond Road and Carling Avenue
- Involves placing “traffic decking” half at a time
- Full traffic resumes
- Tunnel constructed under traffic decking
- Removal of decking, again half at a time
- Reinstatement of road/landscaping

# Vibration Mitigation Measures



**Floating Slab**



**Resilient Fastener**



# Ottawa *Vibration Mitigation Locations South of Carling & West Portal*



# Edgeworth/Lawn Avenue Utility Relocations





# Woodpark Community Garden



# *Permanent Woodpark Community Garden/Lawn Ave Parkette*

- Temporary community garden to be implemented by others for 2017/18 season
- Utility work will displace temporary garden in Spring 2019
- Following utility work, Stage 2 LRT will;
  - ❑ Eliminate surface drainage swale in Lawn Ave connection to NCC lands (to be piped underground along with larger catch basins)
  - ❑ Implement Lawn Ave parkette
  - ❑ Establish permanent Woodpark community garden with water supply and garden shed



# Woodpark Community Garden/Lawn Ave Parkette



# *Next Steps in Project Implementation*

1. Address feedback from the community in upcoming RFP
2. RFP out to tender, June 9, 2017
3. RFP bids received, February 2018
4. Award of Stage 2 contract, May 2018
5. Construction start, late 2018/early 2019
6. Confederation West LRT open for revenue service, end of 2023



# Questions?



# LRT Elevated Alignment at Bayshore/Baseline Split

VIEW FROM  
48M HT

