

ASHBRIDGES BAY
FLEET MAINTENANCE
& STORAGE FACILITY



Connection Track Route Options Commission Meeting

July 6, 2011



TORONTO TRANSIT COMMISSION





Background

At the February 2, 2011 Commission Meeting:

- The Commission approved a motion that staff continue to look at route re-allocations, working with Councillor Fletcher on this, and report back to the Commission.



Ashbridges Bay Connection Track

(As assessed during EA)

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- A comprehensive assessment of 11 potential routes between Cherry Street and Coxwell Avenue was undertaken for the Environmental Assessment Study (EA)
- The assessment recommended Leslie Street as the overall preferred route between the MSF and Queen Street



Approval Process

(Background)

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Meeting Date	Purpose
June 16, 17, 18, 2009	TTC Site Selection Open House
December 16, 2009	TTC Commission Meeting – Site Approval
April 8, 2010	9 Connection Routes presented at Public Meeting
May 18, 2010	City of Toronto Public Works Committee Meeting Approve TTC use of Ashbridges Bay Site
June 2, 2010	Ashbridges Bay Site and Leslie Street Connecting Track approved by TTC Commission
June 9, 2010	Ashbridges Bay Site and Leslie Street Connecting Track approved by City Council
December 7, 2010	Ministers Notice to Proceed – Transit Project Assessment Process*

* Referred to as Environmental Assessment (EA) in presentation

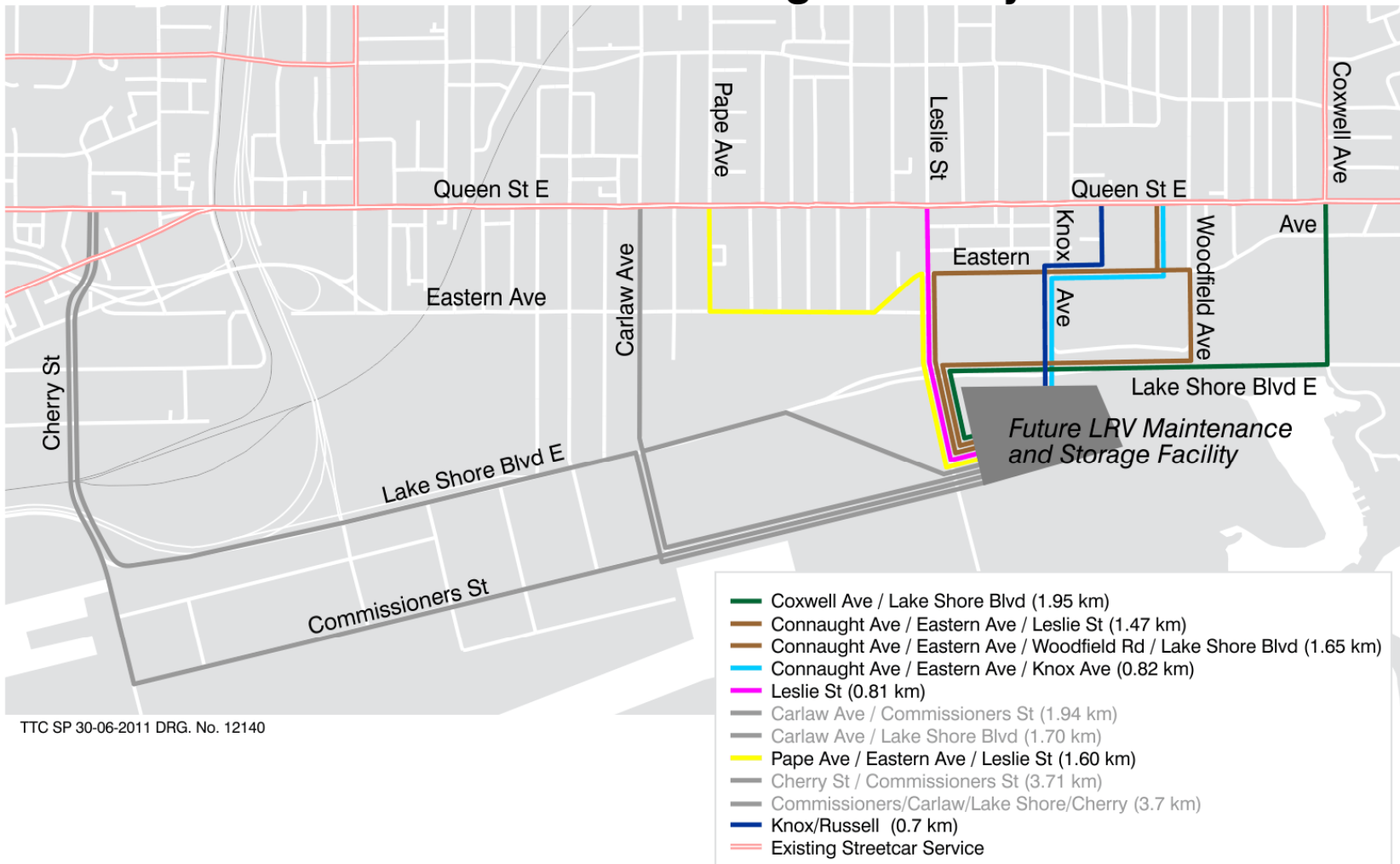


Routes Considered in Assessment

(As assessed during EA)

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Alternative Routes to Future Ashbridges Facility





Route Assessment Evaluation Criteria

(As assessed during EA)

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Connection to Queen Street	Coxwell Avenue	Connaught Avenue			Leslie Street	Pape Avenue	Knox
Routing	Lakeshore	Woodfield	Knox	Leslie Street	Leslie Street	Eastern	Russell
ACCESS, PARKING AND PROPERTY							
NOISE							
CYCLING							
LAND USE/ PLANNING							
TRANSIT OPERATIONS							
TRAFFIC OPERATIONS							
ECONOMIC/ FINANCIAL							
CAPITAL COST (ORDER OF MAGNITUDE, \$M)							

Summary of Route Assessment Evaluation

(As assessed during EA)

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Connection to Queen Street	Coxwell Avenue	Connaught Avenue			Leslie Street	Pape Avenue	Knox*
Routing	Lakeshore	Woodfield	Knox	Leslie Street	Leslie Street	Eastern	Russell
ACCESS, PARKING AND PROPERTY	Better	Mid-Range	Mid-Range	Mid-Range	Mid-Range	Worse	Mid-Range
NOISE	Better	Worse	Worse	Mid-Range	Mid-Range	Worse	Worse
CYCLING	Neutral	Worse	Worse	Neutral	Neutral	Neutral	Worse
LAND USE/ PLANNING	Neutral	Neutral	Neutral	Neutral	Better	Neutral	Neutral
TRANSIT OPERATIONS	Worse	Mid-Range	Mid-Range	Mid-Range	Better	Mid-Range	Worse
TRAFFIC OPERATIONS	Worse	Mid-Range	Mid-Range	Mid-Range	Better	Mid-Range	Mid-Range
ECONOMIC/ FINANCIAL	Worse	Mid-Range	Mid-Range	Mid-Range	Better	Mid-Range	Better
CAPITAL COST (ORDER OF MAGNITUDE, \$M)	\$80	\$65	\$40	\$60	\$35	\$65	\$31

*Knox – 2 lane configuration
Commission Meeting July 6, 2011

↑
Preferred

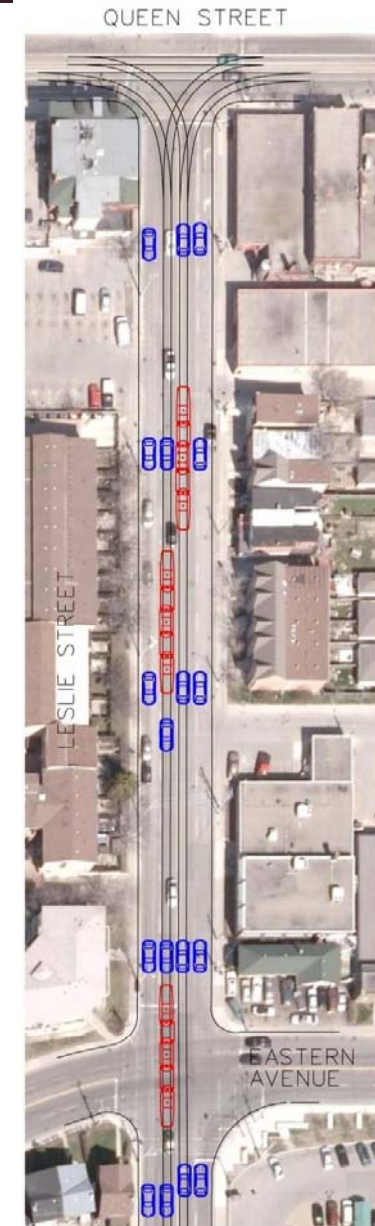
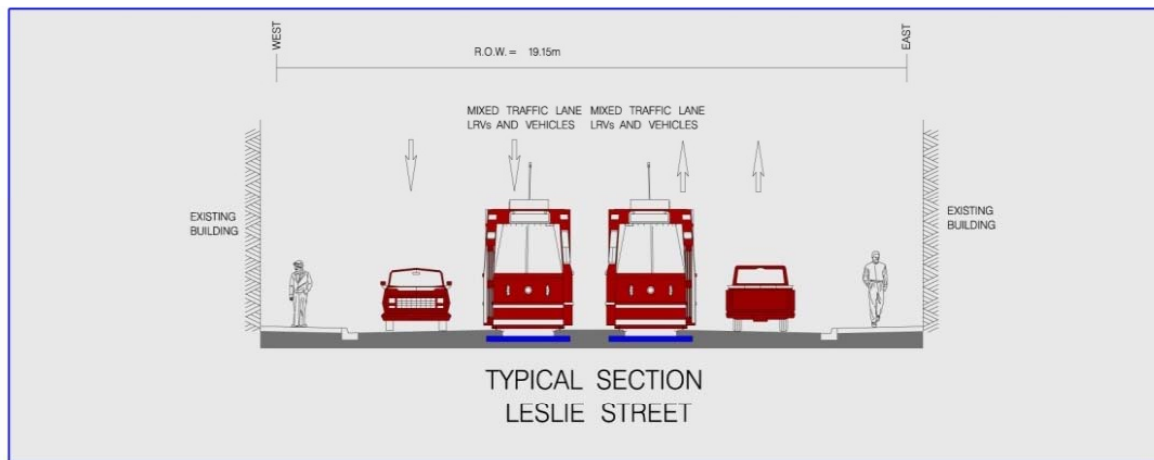


Leslie Street Approved

(As assessed during EA)

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- Best overall rating compared to other routes



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Status of Leslie Street

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- Preliminary engineering began late summer 2010
- Engineering identified extensive utility issues (conflict with Toronto Water's 80 year old infrastructure)
- Various discussions with Toronto Water
- Cost increased above EA
- Agreement to relocate Toronto Water infrastructure based on cost sharing between Toronto Water and the TTC
- Best long term solution for the City
- Details of cost sharing to be developed



Review of Routes

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- Staff were requested to review other connection routes



Review of Routes

- Routes previously considered in the EA were revisited
- No significant changes to characteristics of any route to alter ranking established in the EA
- All routes have utility issues that would require relocation
- No new routes identified



KNOX AVENUE ROUTE

ASHBRIDGES BAY
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- Knox Avenue alignment comparable in length and costs to Leslie Street
 - Subjected to more in-depth review
 - Further analyzed to determine if issues associated with this route can be mitigated

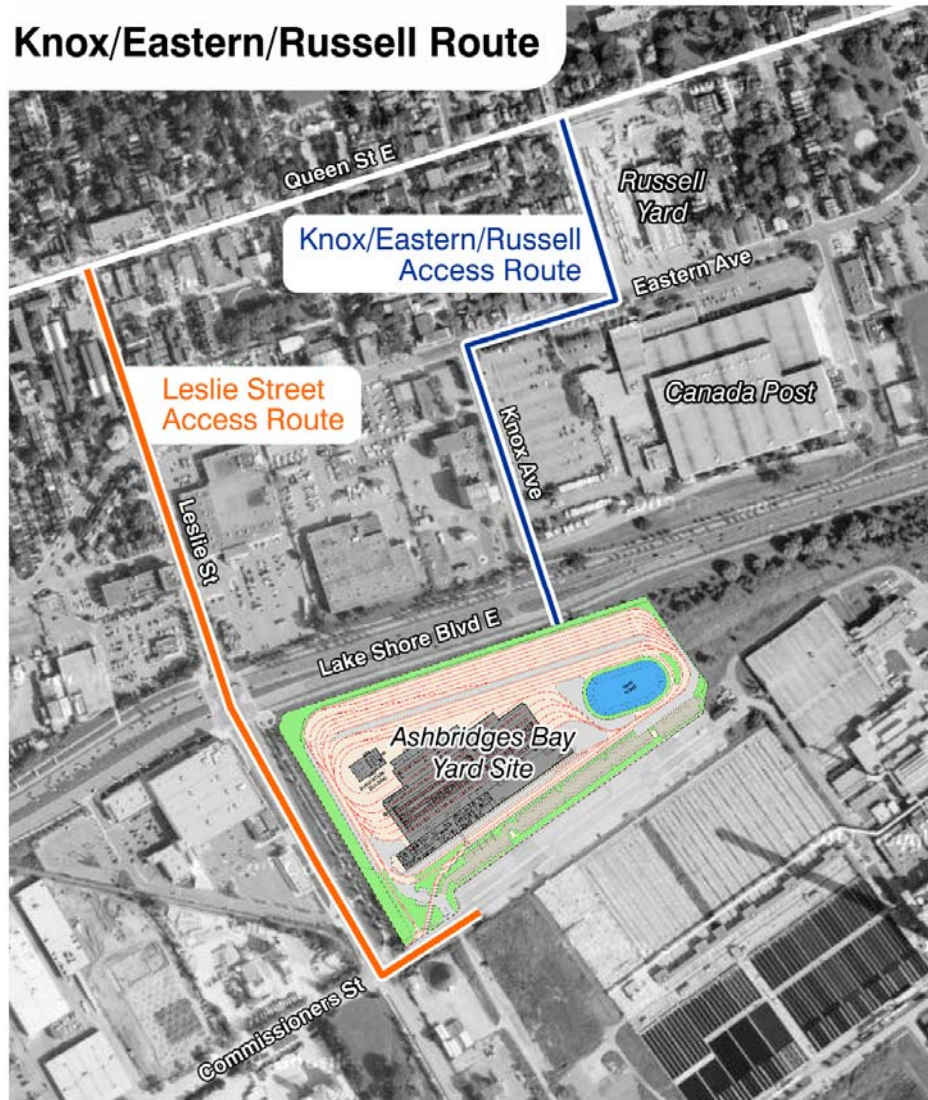


KNOX AVENUE ROUTE

(As assessed during EA)

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Knox/Eastern/Russell Route



TTC SP 10-05-2011 DRG. No. 12135a

- Streetcar access on the north side of Ashbridges Bay onto Lake Shore Boulevard
- Knox Avenue to Eastern Avenue
- East on Eastern Avenue to the west end of Russell Yard.
- Russell Yard connection to Queen Street to tie into existing network

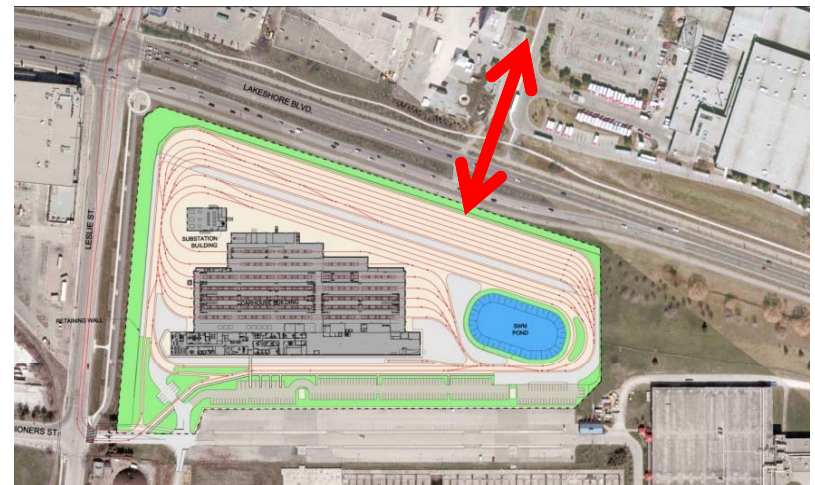


KNOX AVENUE ROUTE

(As assessed during EA)

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- Canada Post Position
 - Strong opposition to a Knox/Eastern Route
 - Deputation and letter to TTC Commission (June 2, 2010)
 - Letter to City Council (June 7, 2010)
 - Letter to Ministry of the Environment (October 29, 2010)
 - 150 truck movements exit between 5am to 7am. Conflicts with Streetcar dispatch every 1.4 minutes during same time period (85 Streetcars between 5am to 7am daily)



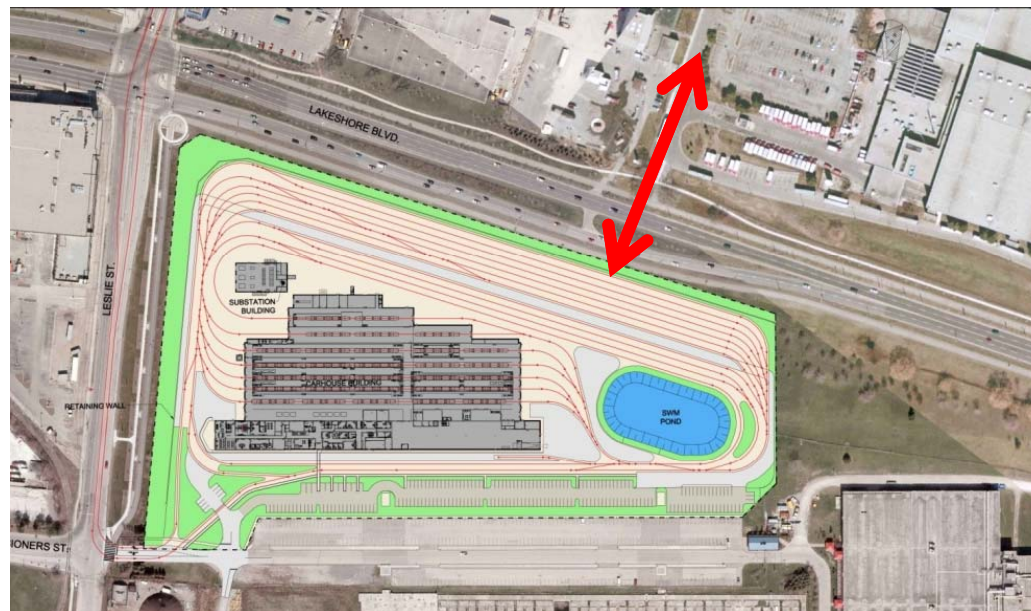


KNOX AVENUE ROUTE

(As assessed during EA)

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- Transit Operations
 - Forces extra circulation around yard
 - Knox is a two lane road
 - No opportunity to manoeuvre around a disabled vehicle
 - Approx. 45% of fleet use route to go into and out of service
 - More turns creating slower operation compared to a direct route



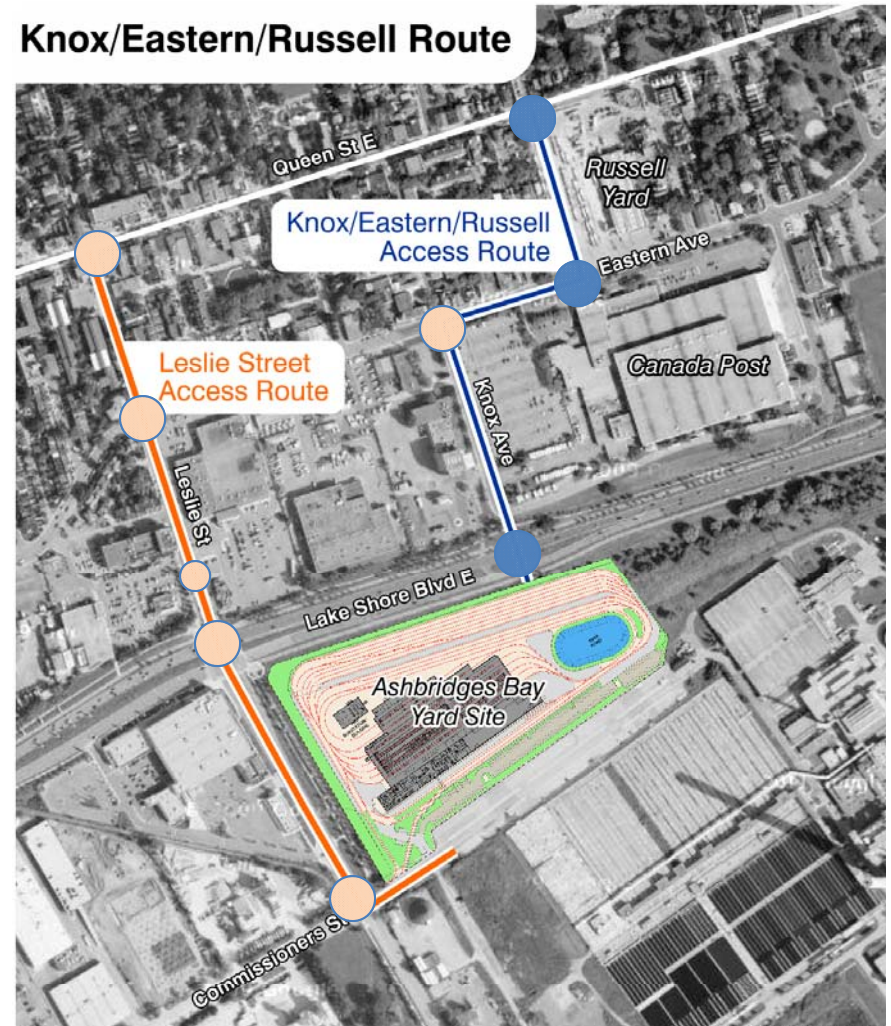


KNOX AVENUE ROUTE

(As assessed during EA)

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- Traffic Operations
 - Three new traffic signals required - Lake Shore Boulevard, Eastern Avenue and Queen Street.
- Noise
 - Potentially more noise due to 2 additional streetcar turns



- New Traffic Signal
- Existing Traffic Signal

TTC SP 10-05-2011 DRG. No. 12135a

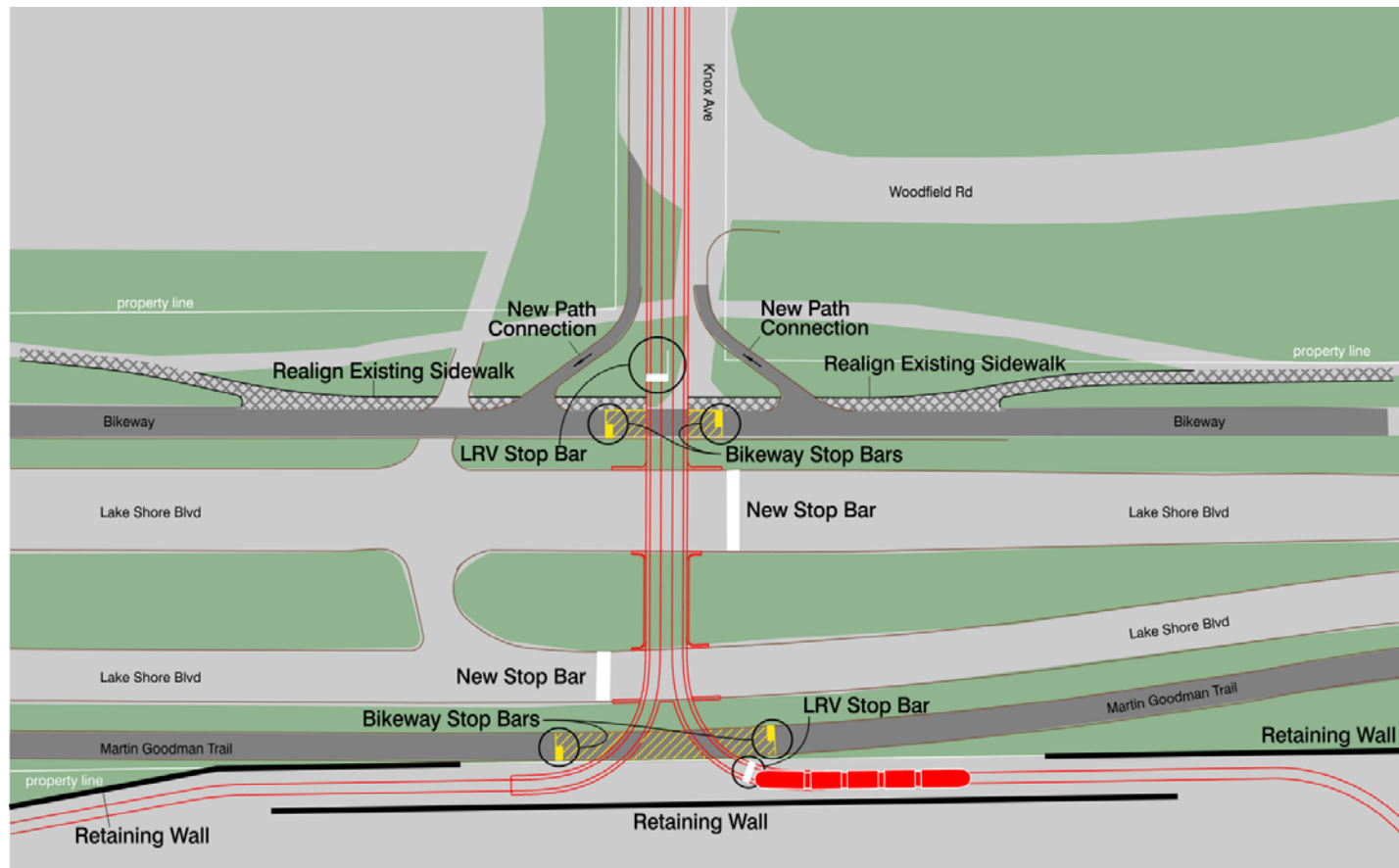


KNOX AVENUE ROUTE

(As assessed during EA)

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- Cycling
 - New crossing of Martin Goodman Trail and Bikeway Trail #4 (north side of Lake Shore)



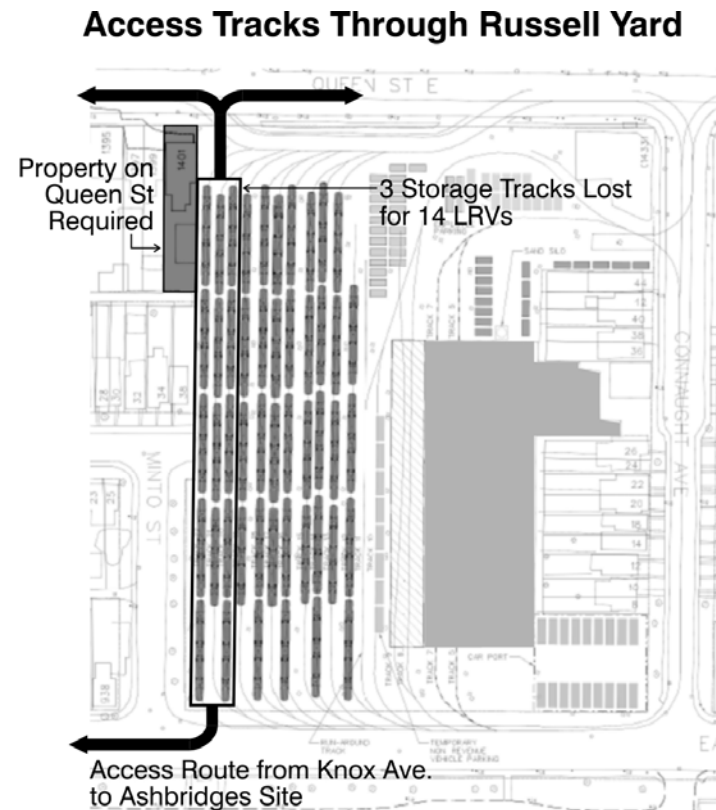


KNOX AVENUE ROUTE

(As assessed during EA)

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- Loss of Streetcar storage space:
 - Removes 14 Streetcar storage locations at Russell yard (7% of system capacity)
- Property
 - require property on Queen Street, adjacent to northwest corner of Russell Yard



TTC SP 10-05-2011 DRG. No. 12135b



KNOX AVENUE ROUTE Reassessment

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How Mitigate?

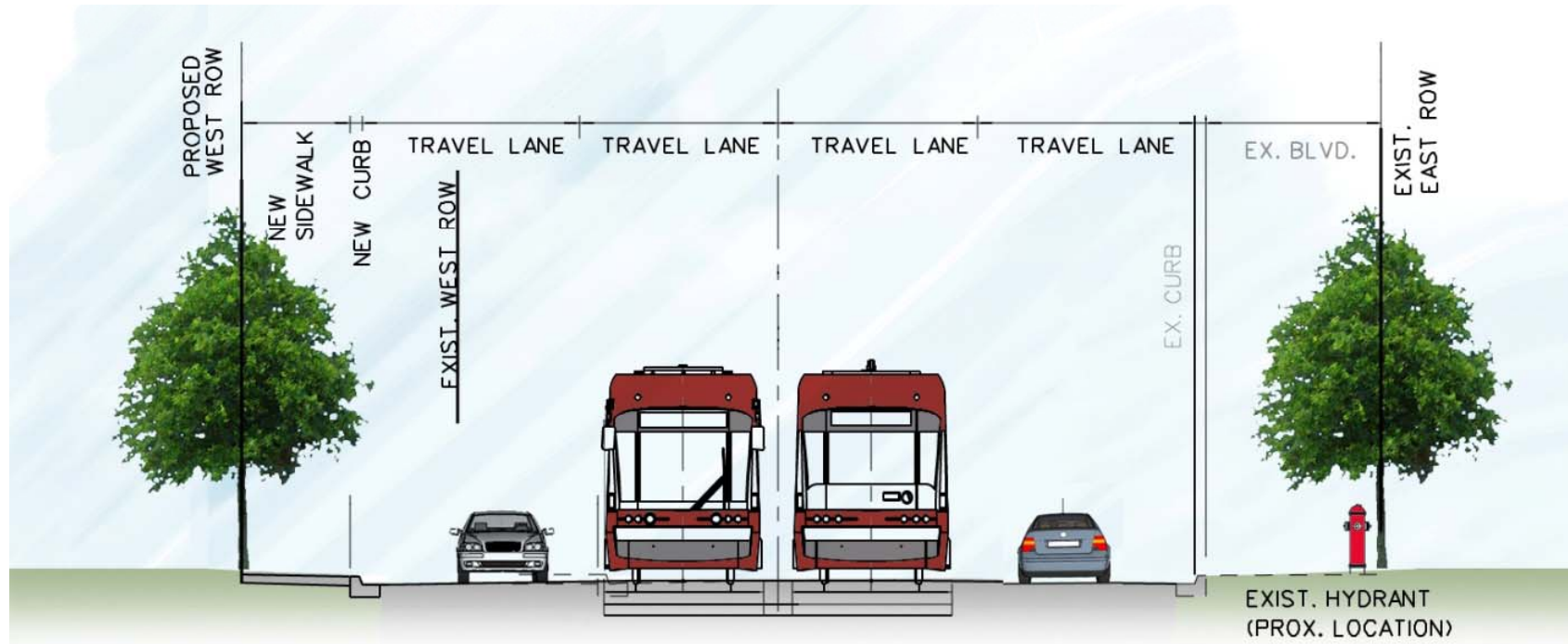
- Convert Knox Avenue to a four lane road
- Requires property on west side of Knox Avenue, just south of Eastern Avenue
- Mitigate Transit Operations:
 - » Disabled vehicle can be moved clear of streetcar tracks
 - » Provides extra road width to mitigate concerns of streetcar blocking emergency vehicles



KNOX AVENUE ROUTE Reassessment

ASHBRIDGES BAY
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4 Lane Cross Section





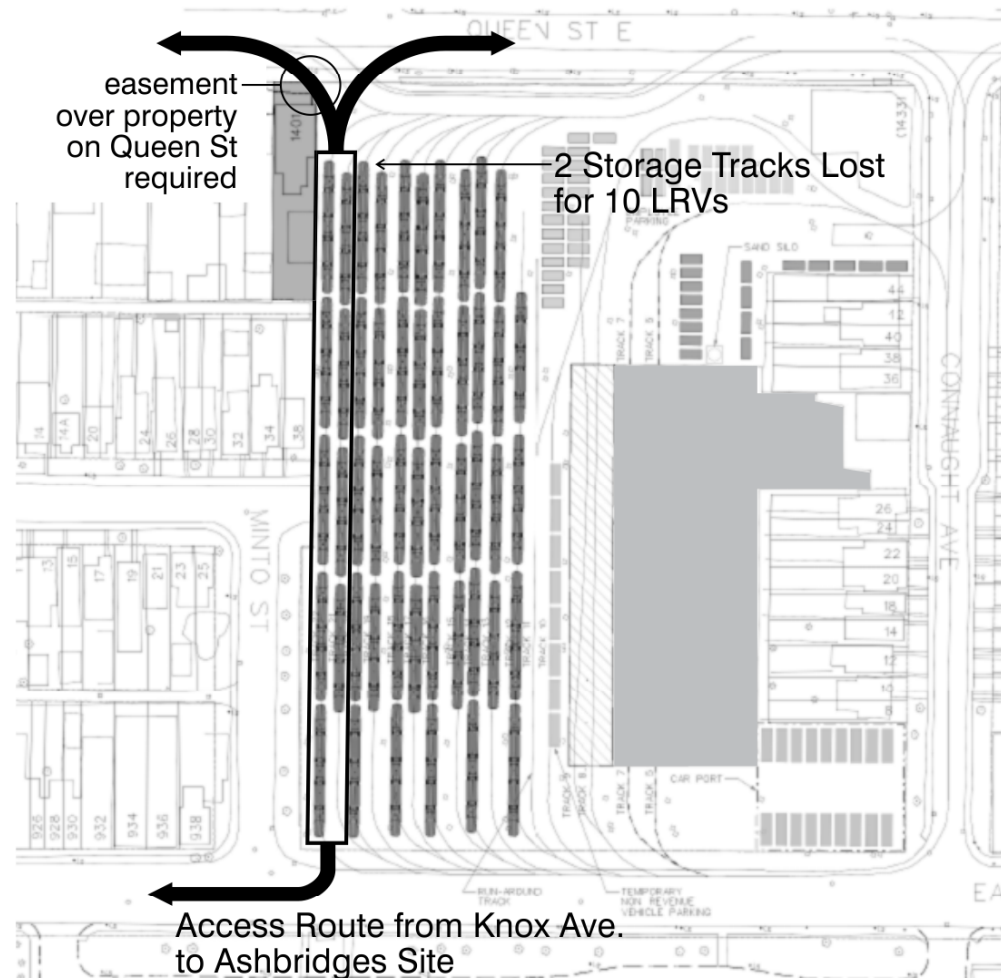
KNOX AVENUE ROUTE Reassessment

ASHBRIDGES BAY
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How Mitigate?

- Redesign of connection track through Russell Yard reduces loss of streetcar storage from 14 to 10 spaces

Access Tracks Through Russell Yard



TTC SP 10-05-2011 DRG. No. 12135d

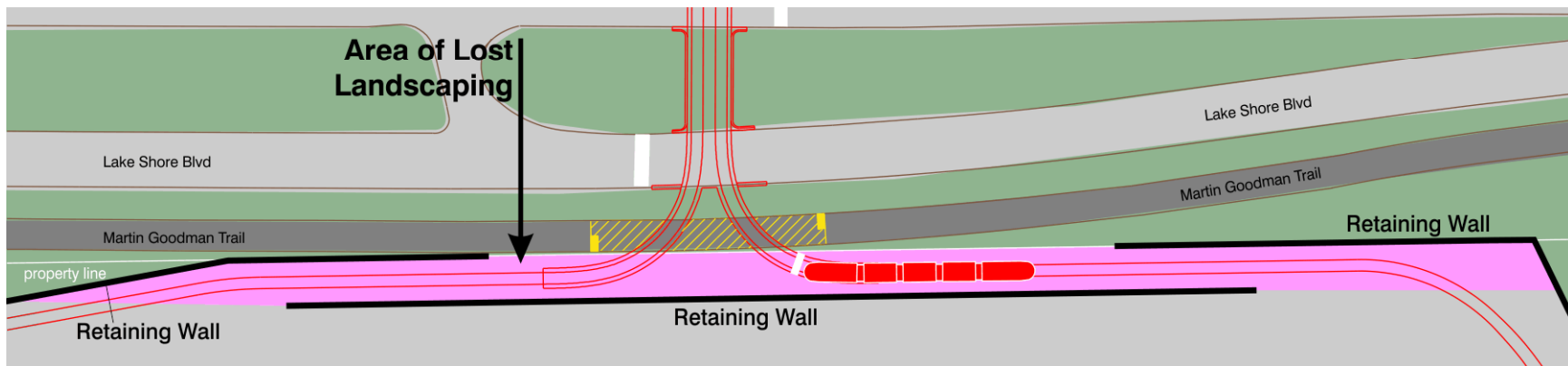


KNOX AVENUE ROUTE Reassessment

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How Mitigate?

- To avoid loss of 20 storage spaces at Ashbridges, fence line moving north
- Results in loss of 180m X 5m of landscape area



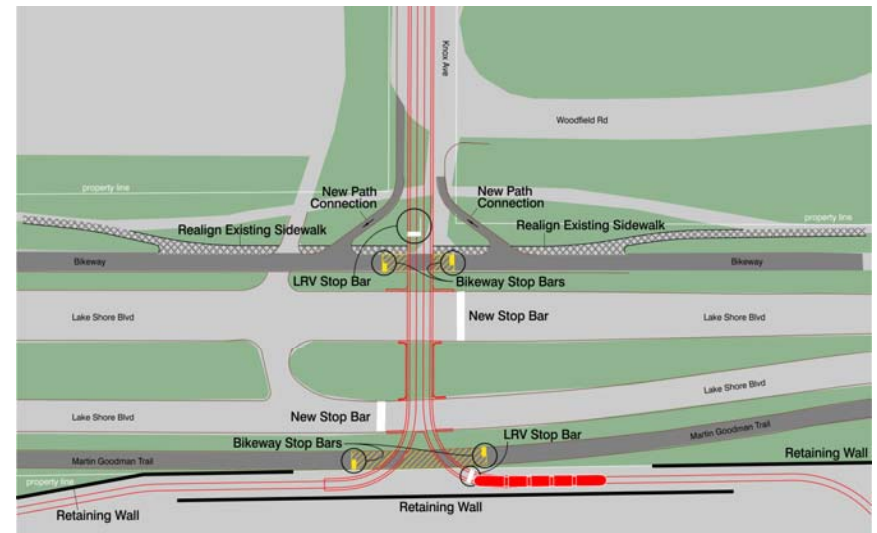


KNOX AVENUE ROUTE Reassessment

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Issues remaining with Knox Route:

- Cycling/Martin Goodman Trail
 - Crossings of 2 trails still required
 - Martin Goodman Trail, and
 - Bikeway Trail #4
 - Streetcar crossing of Martin Goodman Trail at oblique angle
 - Safety concerns for trail users





KNOX AVENUE ROUTE Reassessment

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Issues remaining with Knox Route:

- Transit Operations

- Still requires 3 turns

- Reduced operating speed

- Added travel time

- Knox to Queen +1 minute
- Yard circulation +3 minutes
- Total + 4 minutes

- Increased operating cost of approx. \$430 K per year



KNOX AVENUE ROUTE Reassessment

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Issues remaining with Knox Route

- Traffic Operations

- Canada Post continue to express strong opposition with routing that involves Knox Avenue
 - Main entrance for mail carrying trucks and employees
 - Letter submitted to Ministry of Environment during EA clearly states objection to any routing that has potential to impede entrance or exit from their facility
 - Concerns were re-emphasized:
 - in recent discussions
 - in June 28, 2011 letter to TTC Chair
- Maintenance and Storage Facility redesign
 - Modifications required to existing design of Ashbridges Bay MSF to accommodate streetcar access in northeast corner
 - New access requires signalization to permit safe and efficient crossing of streetcars 350 m East of Leslie Street



COMPARISON OF OPTIONS

Connection to Queen Street	Knox (Russell)		Comments
	2 Lane	4 Lane	
ROUTING			
ACCESS, PARKING AND PROPERTY	Mid-Range	Worse	<ul style="list-style-type: none"> Loss of landscape area on Lake Shore to avoid loss of storage at Ashbridges Bay Property required on Knox
NOISE	Worse	Worse	<ul style="list-style-type: none"> No change
CYCLING	Worse	Worse	<ul style="list-style-type: none"> No change
LAND USE/ PLANNING	Neutral	Neutral	<ul style="list-style-type: none"> No change
TRANSIT OPERATIONS	Worse	Mid-Range	<ul style="list-style-type: none"> 4 lane Knox Reduced storage loss at Russell
TRAFFIC OPERATIONS	Mid-Range	Mid-Range	<ul style="list-style-type: none"> Some improvement on Knox



KNOX AVENUE ROUTE Reassessment

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New Impacts of Knox Routing

- Changing at this time results in:
 - Schedule Implications
 - Requires new Environmental Assessment and redesign of yard
 - 12 – 15 month delay
 - Capital Cost Impacts
 - Additional costs due to escalation (approx. \$15M)
 - Design (approx. \$2M)
 - Delays on Bombardier vehicle delivery (\$ Unknown)
 - Total cost = \$17M++
 - Operating Cost Impacts
 - Approx. \$430k/year



COMPARISON OF OPTIONS

Connection to Queen Street	Leslie Street	Knox (Russell)
Routing	Relocation	4 Lane
ACCESS, PARKING AND PROPERTY	Mid-Range	Worse
NOISE	Mid-Range	Worse
CYCLING	Neutral	Worse
LAND USE/ PLANNING	Better	Neutral
TRANSIT OPERATIONS	Better	Mid-Range
TRAFFIC OPERATIONS	Better	Mid-Range
ECONOMIC/FINANCIAL	Better	Better
CAPITAL COST (ORDER OF MAGNITUDE, \$M)	\$63 - \$66 M	\$52 M
DESIGN/ESCALATION	0	\$17M
TOTAL CAPITAL COST	\$63 - \$66 M	\$69 M++
OPERATING PREMIUM OVER 40 YEARS	0	\$17M
TOTAL ROUTE COST	\$63 - \$66 M	\$86 M
SCHEDULE IMPACT	6+ months added to schedule (Q1- 2014)	New EA and redesign– 12-15 month delay (Q1-Q2 2015)
VEHICLE STORAGE	204	194



Conclusions

- Leslie Street and Knox Avenue routes comparable in capital cost
- Knox Avenue has higher operating cost
- Leslie Street performs better on remaining EA criteria