



BUILDING MARKHAM'S
FUTURE TOGETHER



Staff Update on Metrolinx's “Creating Connections” Presentation

Development Services Committee

May 8, 2017



Agenda

- Metrolinx Rail Network
- Access to GO Rail Stations
- Regional Express Rail components affecting Markham
- Potential Station locations in Markham
- Grade Separations – cost compare
- Mobility Hub Study – an update
- Questions & Answers
- Staff Recommendations



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MARKHAM

Metrolinx Rail Network



Source: Metrolinx

Modes of Travel

TRIPS MADE BY RESIDENTS OF TOWN OF MARKHAM

Time Period	Trips	% 24 hr	Trip Purpose				Mode of Travel					Median Trip Length (km)				
			HB-W	HB-S	HB-D	N-HB	Driver	Pass.	Transit	GO Train	Milk & Cy	Other	Driver	Pass.	Transit	GO Train
6-9 AM	160,100	24.8%	44%	21%	25%	10%	62%	15%	9%	5%	6%	2%	7.2	3.4	18.4	26.0
24 Hours	646,000		31%	12%	41%	16%	67%	18%	7%	3%	4%	1%	5.7	4.3	17.2	26.0

TRIPS TO TOWN OF MARKHAM

Time Period	Trips	% 24 hr	Trip Purpose				Mode of Travel					Median Trip Length (km)				
			Work	School	Home	Other	Driver	Pass.	Transit	GO Train	Milk & Cy	Other	Driver	Pass.	Transit	GO Train
6-9 AM	148,000	23.7%	51%	20%	7%	22%	71%	15%	4%	0%	7%	3%	7.7	3.0	6.8	32.2
24 Hours	624,400		18%	5%	43%	34%	70%	18%	5%	1%	4%	1%	5.8	4.3	12.7	26.0



Rail & Bus Service

Route/line: **Stouffville**
 Direction of Travel: **Southbound to Union Station**
 Date of Travel:

Source: Metrolinx

Route Number	71A	71F	70B	70B	70B	70B	70B	70B	70B	70B	70B	70B	70B	70B	70B	70B	70B	70E	70A	71E	71A	71F	71D	71F	71D	71F	71D	71F		
Uxbridge - Railwalk & Service			05:19	05:59	06:38	07:36	08:31	09:40																						
Goodwood - Hwy 47 & Front			05:32	06:12	06:51	07:49	08:44	09:53																						
Lincolnville GO			05:15	06:19	06:34	06:41	06:58	07:13	07:41	08:51	10:00	10:30	11:00																	
Stouffville GO			05:22	06:01	06:41	06:48	07:20	07:48	08:18	08:57	10:06	10:36	11:06																	
Mount Joy GO			05:32	06:11	06:51	06:58	07:30	07:58	08:28	09:06	10:15	10:20	11:20																	
Markham GO			05:37	06:16	06:56	07:03	07:35	08:03	08:33	09:11	10:20	10:25	11:25																	
Centennial GO			05:13	05:42	07:01	07:08	07:40	08:08	08:38	09:17	10:31	11:01	11:31																	
Unionville GO			05:20	05:47	07:07	07:14	07:46	08:14	08:44	09:34	10:40	11:10	11:40																	
Milliken GO			05:55	06:35	07:15	07:22	07:54	08:22	08:52	09:57	11:04	11:34	12:04																	
Auricourt GO			06:02	06:42	07:22	07:29	08:01	08:29	08:59	10:04	11:11	11:41	12:11																	
Kennedy GO			06:09	06:49	07:29	07:36	08:08	08:36	09:06	10:11	11:18	11:48	12:18																	



Access to GO Rail Station

- This is a challenge for Metrolinx and municipalities especially for RER in the future
- If current access pattern do not change, Metrolinx will need another 75,000-80,000 additional parking (@\$4,000-\$5,000)
- Need to shift to sustainable modes

	2015 ACCESS LEVELS (ACTUAL)		2031 ACCESS TARGET	
	2013 Plan	2016 Plan	2013 Plan	2016 Plan
Walking	8.5%	12-14%		
Transit	8.5%	25-27%*	50%**	
Cycling	1%	2-4%		
Pick up/Drop off	15%	20-22%		
Carpool Passenger	4.5%	5-7%	50%	
Drive and Park	62%	36-38%	100%*	100%
Total			100%	100%

Final Report
December 12, 2016

GO Rail Station Access Plan

METROLINX
Public Transit



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GO Transit Survey Data

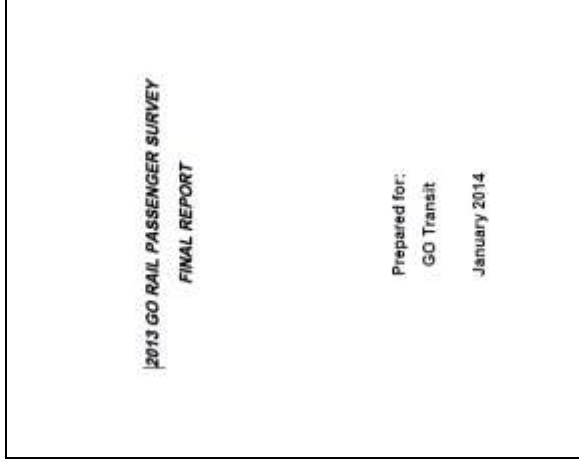
- GO Transit carries out alternate rail and bus passenger survey each year.

EXHIBIT 39. Table Comparing Riders' Station Access Modes: Comparison between 2007/08, 2009/10, 2011, and 2013 Surveys (Weighted Data)

	Car (drove by myself, passenger, carpool)*	Walked	GO Bus	Local Transit/ TTC	Various Other	n (survey sample)
2007/08 Rail Survey	81%	8%	1%	9%	1%	11,174
2009/10 Rail Survey	78%	9%	2%	10%	3%	11,927
2011 Rail Survey	81%	9%	2%	9%	0%	11,294
2013 Rail Survey	78%	9%	1%	8%	5%	14,121

* Response categories combined due to differences between survey cycles.

Source: GO Transit



Stouffville Corridor Station Access Modes

6.1.7 Stouffville Corridor - From Origin to Boarding Station

Source: GO Transit		Drove myself	Parked at GO station	Dropped off	Car Pooled	Local Transit	GO Bus	Bicycle	Motorcycle/Scoter	Walked	Special Transit	Other	Total
Kennedy Station		13	0	16	3	11	0	0	0	32	0	0	75
% Station Total		17.9%	0.0%	21.4%	3.6%	14.3%	0.0%	0.0%	0.0%	42.9%	0.0%	0.0%	100.0%
Agincourt Station		404	10	39	0	10	0	0	0	59	0	0	522
% Station Total		77.4%	1.9%	7.5%	0.0%	1.9%	0.0%	0.0%	0.0%	11.3%	0.0%	0.0%	100.0%
Milliken Station		405	34	190	26	43	9	0	0	9	0	0	715
% Station Total		56.6%	4.8%	26.5%	3.6%	6.0%	1.2%	0.0%	0.0%	1.2%	0.0%	0.0%	100.0%
Unionville Station		1075	33	279	49	230	16	8	0	0	8	0	1699
% Station Total		63.3%	1.9%	16.4%	2.9%	13.5%	1.0%	0.5%	0.0%	0.0%	0.5%	0.0%	100.0%
Centennial Station		460	33	226	25	42	0	0	0	201	0	0	987
% Station Total		46.6%	3.4%	22.9%	2.5%	4.2%	0.0%	0.0%	0.0%	20.3%	0.0%	0.0%	100.0%
Markham Station		475	7	197	0	41	0	14	0	231	0	0	985
% Station Total		49.3%	0.7%	20.4%	0.0%	4.2%	0.0%	1.4%	0.0%	23.9%	0.0%	0.0%	100.0%
Mount Joy Station		952	59	202	17	51	8	0	0	219	0	0	1508
% Station Total		63.1%	3.9%	13.4%	1.1%	3.4%	0.6%	0.0%	0.0%	14.5%	0.0%	0.0%	100.0%
Stouffville Station		336	60	129	34	0	0	26	0	129	0	0	714
% Station Total		47.0%	8.4%	18.1%	4.8%	0.0%	0.0%	3.6%	0.0%	18.1%	0.0%	0.0%	100.0%
Lincolnville Station		147	0	17	0	0	21	0	0	0	0	0	185
% Station Total		79.5%	0.0%	9.1%	0.0%	0.0%	11.4%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total		4267	236	1295	154	428	54	48	0	880	8	0	7370
% Corridor Total		57.9%	3.2%	17.6%	2.1%	5.8%	0.7%	0.7%	0.0%	11.9%	0.1%	0.0%	100.0%

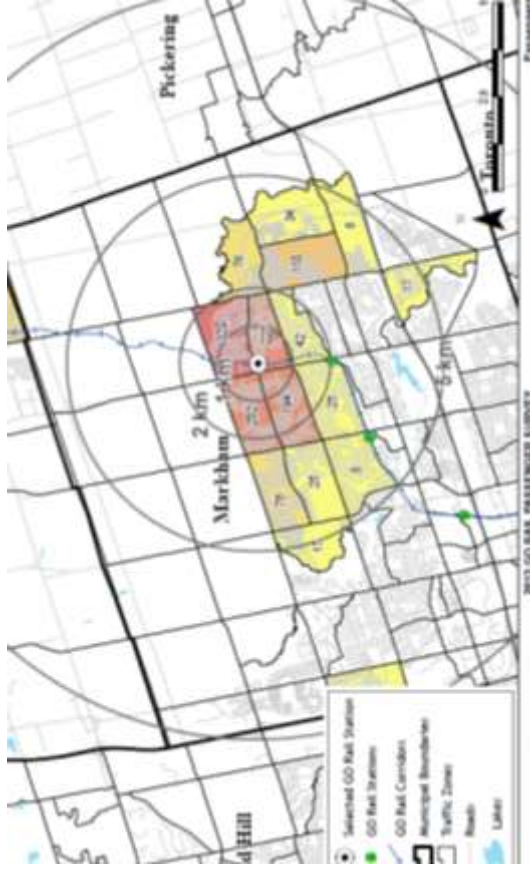
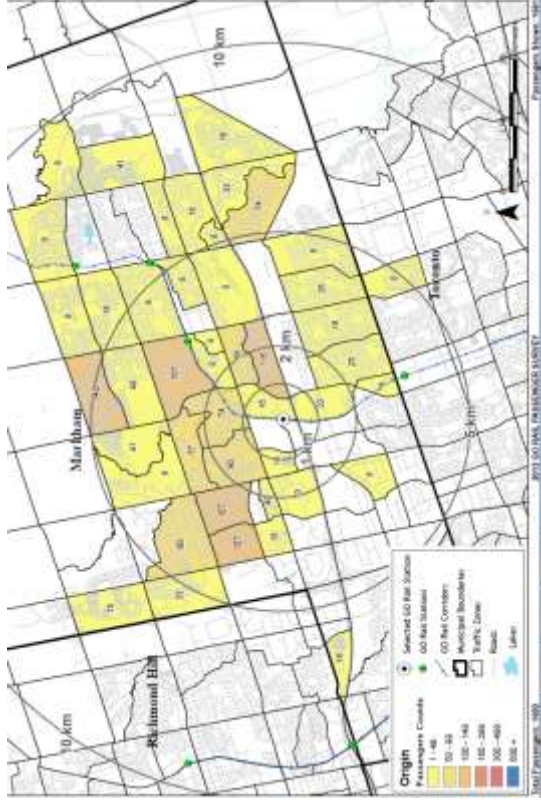
Source: GO Transit



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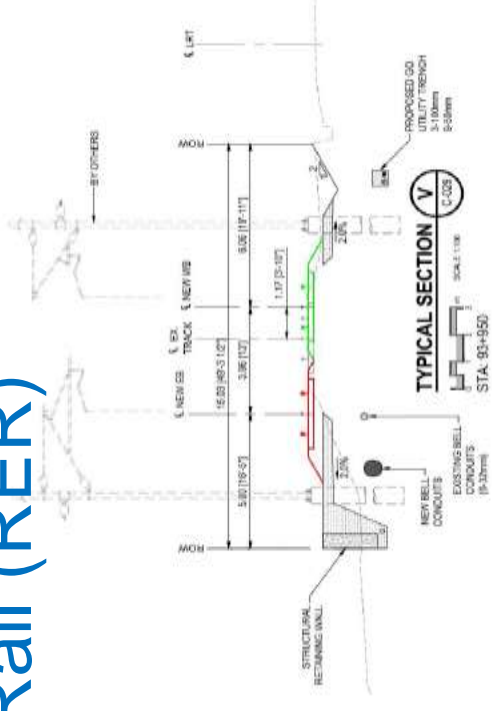
Trip Origin Patterns



Source: GO Transit

Regional Express Rail (RER)

- To improve service and increase train frequency, Metrolinx need to:
- Add **second tracks** (2-way service)
 - Improve **stations** (access, parking, platforms)
 - Implement **electrification** (higher acceleration/deceleration, sustainability, noise, emission)
 - Build **grade separations** (safety, traffic operations, reduce trespassing)



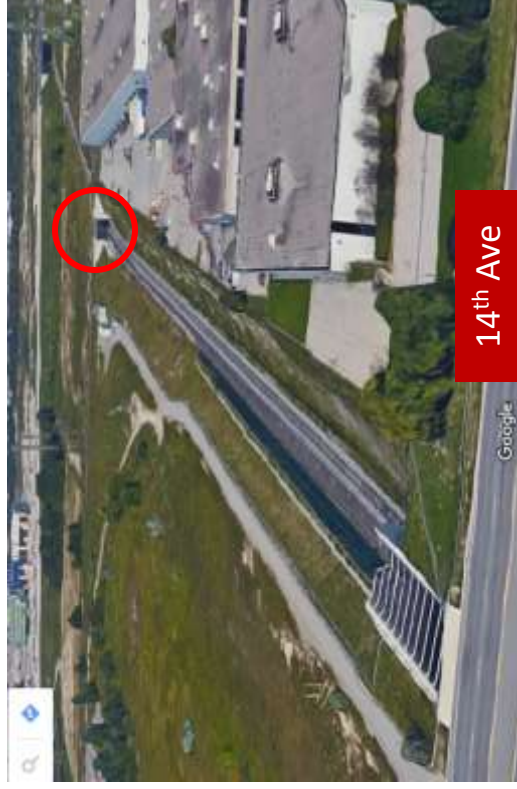
Potential Station Locations

- Council Meeting May 3, 2016 endorsed **Denison St.** and **Major Mackenzie Dr E.**
- Council Meeting November 25, 2014 to study the feasibility of GO Station/Mobility Hub at John Street.
- Council Meeting May 15, 2012 a steering committee be created and a working group be formed to study **I-METRO-E** concept.





Potential GO Station at 14th Avenue



Looking North from 14th Avenue



Looking South from CN York Subdivision

○ Hagerman Diamond rail-to-rail grade separation was opened in 2008 at a cost of \$54 million after 2 years of construction.



Recent Rail Grade Separations in Markham

- Enterprise Blvd Rail Bridge (2005) \$7.33 M – rail diversion only
- Birchmount Road Rail Bridge (2012) \$4.65 M – rail diversion only
- Rodick Road Bridge (2013) \$6.68 M – road over rail
- Steeles Avenue Grade Separation (2017) \$120M – rail diversion and road diversion
- Time lapse Birchmount Bridge
- Springvale Level Crossing Removal, Victoria, Australia: A\$159 Million (2013) – road closed for 10 days with rail realigned and construction of with a new rail station⁶

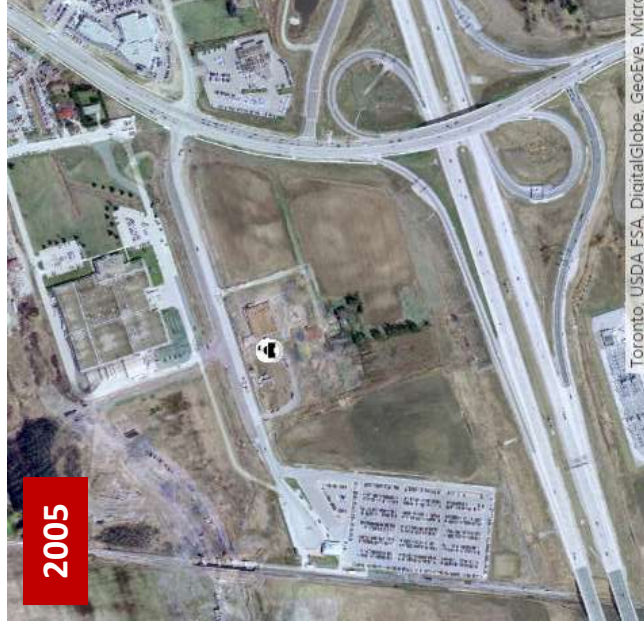
Mobility Hub Study Phase 1

- Council Meeting on May 31, 2016:
 - Phase 1 study to be led by Metrolinx
 - Markham Funding support of \$71K
 - Update Council throughout the study process (tentative September)
 - Study deliverables: overall structure plan (overall vision, road pattern, development blocks), transportation services (407 Transitway, VIVA, GO Rail, other modes of transportation and connectivity), high level financial analysis to confirm financial viability, Unionville station design (access, circulation, parking), implementation plan



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Questions & Answers



Staff Recommendations

- That the May 8, 2017 staff presentation entitled ‘Staff Update on Metrolinx’s “Creating Connections”’ be received;
- And that a sub-committee of 4-5 members comprising of councillors and regional councillors be formed with the mandate of monitoring the progress of transit initiatives of various levels of government, and advising Council on transit matters;
- And that staff be authorized and directed to do all things necessary to give effect to this resolution.