DRAFT
ACTIVE TRANSPORTATION NETWORK SUMMARY REPORT

February 5, 2014

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With assistance from:

Poulos & Chung

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1 PURPOSE

The Provincial Growth Plan for the Greater Golden Horseshoe, the York Region Official Plan and the Newmarket Official Plan are committed to promoting active transportation as a means of shifting to more sustainable modes of transportation, providing transportation choices and reducing traffic congestion. Active transportation also promotes a more active lifestyle and includes benefits to health and air quality.

A strong emphasis on active transportation is a key component of the Urban Centres Secondary Plan. The Plan places the Urban Centres at the "heart" of the Town's mobility network, and that includes the active transportation network. To truly function as the heart of the Town's mobility network, it is important to consider how the "heart" connects to the rest of the system.

In August 2012, the Town of Newmarket initiated an Active Transportation Study in conjunction with the Urban Centres Secondary Plan to define a comprehensive Active Transportation Network for the town that will inform the Secondary Plan process and also the future active transportation planning and investment within and outside of the Secondary Plan area that will help further the success of the Urban Centres Secondary Plan.

The intent of the study was to refine the On-Street Bike Lane and Off-Street Trails plans in Schedules D and E of the Town of Newmarket Official Plan.

The scope of work for the study was comprised of the following components:

1. Existing Conditions Analysis
2. Opportunities and Constraints Analysis
3. Active Transportation Concept Development
4. Recommendations

Active Transportation in this study is defined as:

"A cohesive system of active transportation infrastructure permitting people to accomplish all daily primary trip making purposes in a safe and efficient manner."

It is important to note that the focus of the network is to serve commuting trips – to school, to work, to shops, and so on – as opposed to focusing recreational or leisure trips, although this does not preclude the network from being used for all types of uses including recreational uses. The Town is undertaking the development of an Alternative parkland Dedication By-law and the cost of upgrading the active transportation network which can be used for recreational purposes will be a cost consideration in the development of the By-law.

As outlined in the draft Urban Centres Secondary Plan, Active Transportation includes non-motorized travel, including walking, cycling, roller blading and movements with mobility devices. The physical network itself includes sidewalks, pedestrian mews, designated bicycle facilities, off-road trails, and other facilities designed to accommodate active transportation.

TOM TAYLOR TRAIL, NEWMARKET

TOM TAYLOR TRAIL AT FAIRY LAKE, NEWMARKET

TRAIL DURING WINTER, NEWMARKET

2 METHODOLOGY

The following provides an overview of the methodology for the development of the draft Active Transportation Network.

2.1 Existing Conditions Analysis

The study was initiated with an analysis of existing conditions within the study area using Town data. This included reviewing existing right-of-way widths, mapping existing and planned on- and off-street bike lanes, trails and sidewalks. **Figure 1** provides a composite Existing Conditions and Plans Map. The map identifies the existing and proposed on and off road facilities derived from existing Plans and Studies. This draws from a number of sources and is informative to the background for our recommendation going forwards in OPA #11.

2.2 Origins and Destinations

An Opportunities Analysis was conducted in conjunction with the Existing Conditions Analysis and in collaboration with the Town and Region staff to identify major origins and destinations within the Town that could function as the anchors of the Active Transportation Network.

The study identified key origins and destinations within the town, including schools, recreational facilities, transit stations and major employment and shopping centres (**Figure 2**). These origins and destinations function as attractors and generators for travel within the Town and Region. Regionally, these include: GO Transit Stations along Davis Drive, Upper Canada Mall, the York Region Administration Centre and Southlake Regional Health Centre. Locally, these include: the Ray Twinney Recreation Complex, the Magna Centre, Main Street Heritage District, Newmarket Public Library, etc.

Existing active transportation mode shares were also analyzed to determine existing locations of higher intensities of walking and cycling. In order to analyze the current conditions of the Town of Newmarket, Poulos & Chung Ltd derived information from the Transportation Tomorrow Surveys (TTS) conducted in 2006 by the Data Management Group of the Department of Civil Engineering at the University of Toronto[1]. **Figure 3** and **Figure 4** illustrate 2006 Active Transportation (Walking and Cycling) travel patterns in the Town of Newmarket. The maps illustrate the number of trips that originated from each traffic zones based on a colour gradient scale. The darker the traffic zone indicates a higher number of origin trips and vice versa. It should be noted that cycling and walking activities only occurred within the Town of Newmarket. Beside each map are figures that illustrate a more detailed active transportation trip distribution of traffic zones with high trip productions.

Table 1 summarizes active transportation travel pattern of Newmarket's residents based on trip purposes which include: Home-based Work; Home-based School; Home-based Discretionary; and Non-home based.

Based on the figures and table, the following conclusions can be made:

- Majority of the walking trips generated by the residents of Newmarket are students (72%). Walking trips are mostly found in traffic zones with prominent number of

[1.] The methodology for the survey is described in detail in the TTS (2006) reports. The methodology involved conducting a random selection sample survey.

residential developments and educational institutions. For example, traffic zones located west of Leslie Street and Davis Drive have a large number of residential developments as well as popular community attractors such as public schools and recreational facilities.

- Home-based work (39%) and school (38%) make up most of the cycling trips generated throughout the day. Large amount of cycling trips originated at traffic zones located in the northwest corner of Leslie and Davis Drive.
- It appears that the Hospital is a primary attractor of work trips that are accommodated by walking.
- The Yonge Street corridor appears to attract very few work trips by walking or cycling.

Additionally, an important factor that influences the success of the active transportation network and a shift to more active forms of transportation is the number of residents that live and work in Newmarket. According to the 2011 National Household Survey conducted by Statistics Canada, 47% of the workforce live and work in Newmarket - among the highest in York Region. This live/work percentage demonstrates the potential opportunity for work trips to benefit from the active transportation network.

A Constraints Analysis was also conducted where major barriers or constraints to building a robust Active Transportation Network were identified in consultation with Town and Region staff.

Major barriers or constraints to building a robust active transportation network include rail corridors, areas of challenging topography and high traffic areas.

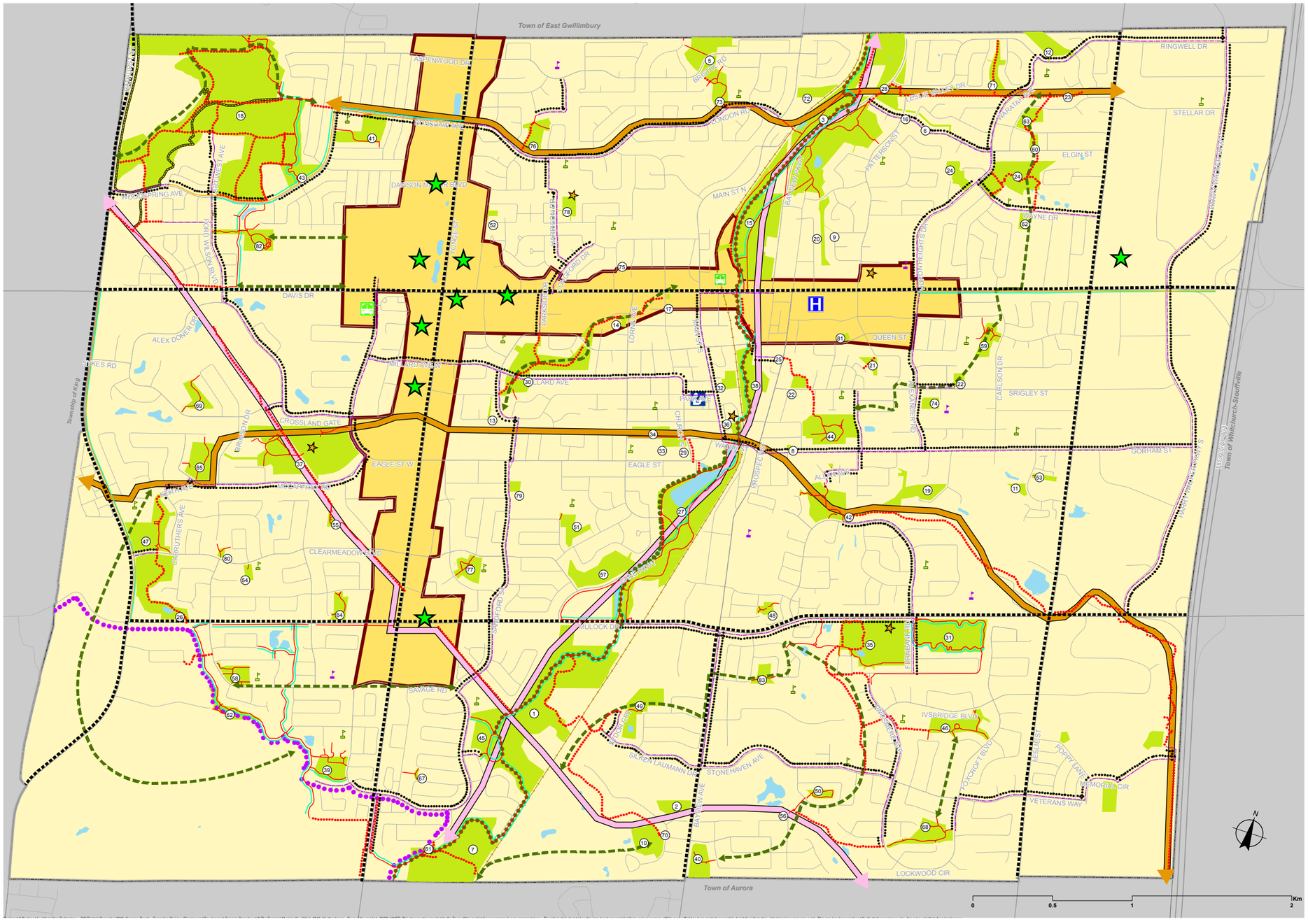
Meetings were held to further refine the network based on an analysis of existing right-of-way and trail widths to understand the immediate challenges of implementing the network. This also included identifying on and off-road routes that could easily be expanded to accommodate the network. Major barriers included insufficient pavement, limited direct connections, narrow right-of-ways and a lack of pedestrian and cycling bridge connections over natural heritage systems and rail corridors in particular.

TABLE 1 ACTIVE TRANSPORTATION TRAVEL PATTERNS BASED ON TRIP PURPOSE

Mode of Travel	Home-Based Work	Home-based School	Home-based Discretionary	Non-home based	Total
Walking	1999 (20%)	7079 (72%)	256 (3%)	432 (4%)	9766
Cycling	158 (39%)	156 (38%)	77 (19%)	17 (4%)	408
Total	2157 (21%)	7235 (71%)	333 (3%)	449 (4%)	10,174

FIGURE 1:

Town of Newmarket - Active Transportation Existing Conditions and Plans



Existing Network
- Existing Trails
- Existing On-Street Bike Lanes

Town of Newmarket Official Plan
- Future On-Street Biking
- Future Regional Road Bike Lanes
- Conceptual Trail System

Parks Policy Development Manual
- Multi-Use Trails
- Primary Trails
- Secondary Trails
- Proposed Bike Lanes

Peggy's Wood and Bathurst Area Forest Master Plan
- Proposed Multi-Use Trail

Regional Cycling Network
- York Region Cycling Network

Greenbelt Cycling Route
- Proposed Greenbelt Cycling Route

Lake to Lake Cycling Route
- Proposed Lake to Lake Cycling Route

- Potential Connections to other Municipalities
- Railway
- Waterway
- Highway
- Roads
- Parks
- Urban Centres Secondary Plan Area
- GO Station
- Newmarket Public Library
- Southlake Regional Healthcare Centre
- Arenas, Pools and Community Centres
- Major Shopping Centre
- Elementary School
- Secondary School

Passive Green Space
1 Bailey Ecological Park
2 Bayview Avenue Open Space
3 Bayview Parkway Open Space
4 Coventry Hill Trail Open Space
5 Denne Bush
6 Elgin Street Open Space
7 Foxtail Ridge Rear
8 Gorham Street Open Space
9 Irwin Crescent Walkway
10 Kinara Court Open Space
11 Lawton Bros Parkette
12 Leslie Valley Drive Open Space
13 Lewis Drive Open Space
14 Lorne Avenue Open Space
15 Mabel Davis Conservation Area
16 Magnolia Open Space
17 Niagara Street Open Space
18 Northwest Quadrant Woodlot
19 Premier Place Open Space
20 Red Deer Street Open Space
21 Roxborough Road Open Space
22 Srigley Street Open Space
23 St Elizabeth Seton School Open Space
24 Waratah Open Space
25 Wellington Street Open Space
26 William Thomas Mulock Park

Town Park
27 Fairy Lake (Wesley Brooks Conservation Area)
28 George Richardson Park
29 Gorman Outdoor Pool
30 Haskett Park
31 Heritage Farm & Community Garden
32 Keith Davis Tennis Centre
33 Lawn Bowling Club
34 Lions Park
35 Magna Centre
36 Newmarket Riverwalk Commons
37 Ray Twinney Recreation Complex

Community Park
38 All Our Kids Playpark
39 Armstrong Park
40 Art Ferguson Park
41 Bonshaw Avenue Park
42 College Manor Park
43 Environmental Park
44 Fairgrounds Park
45 Paul Semple Park
46 Rene Bray Park
47 Whipper Billy Watson Park

Neighbourhood Park
48 Arnhem Park (Legresley Park)
49 Audrie Sanderson Park
50 Best Family Parkette
51 Beswick Park
52 Cardinal Parkette
53 Charles Boyd Park
54 Clare Salisbury Park
55 Clearmeadow Park
56 Comfort Lane Park
57 Dennis Park
58 Dr Margaret Arkinstall Park
59 Drew Doak Park
60 Evanslea Park
61 Foxtail Ridge Parkette
62 Howard Park (Philmore Hamilton Park)
63 Jacarandah Park
64 Jim Bond Park
65 Joe Persechini Park
66 John Georgas Park (Allan Avenue Park)
67 Keffer Parkette
68 Ken Sturgeon Park
69 Kirby Crescent Park
70 Laurelwood Parkette
71 Leslie Valley Park
72 M H Stiles Park
73 Marilyn Powell Park
74 Marsh Park (Found Park)
75 Newmarket Heights Community Parkette
76 Proctor Park
77 Quaker Hill Park
78 Rogers Park
79 Sanford Parkette
80 Seneca Cook Parkette
81 Sunnyhill Park
82 Woodland Hills Labyrinth Park
83 Willowick Park

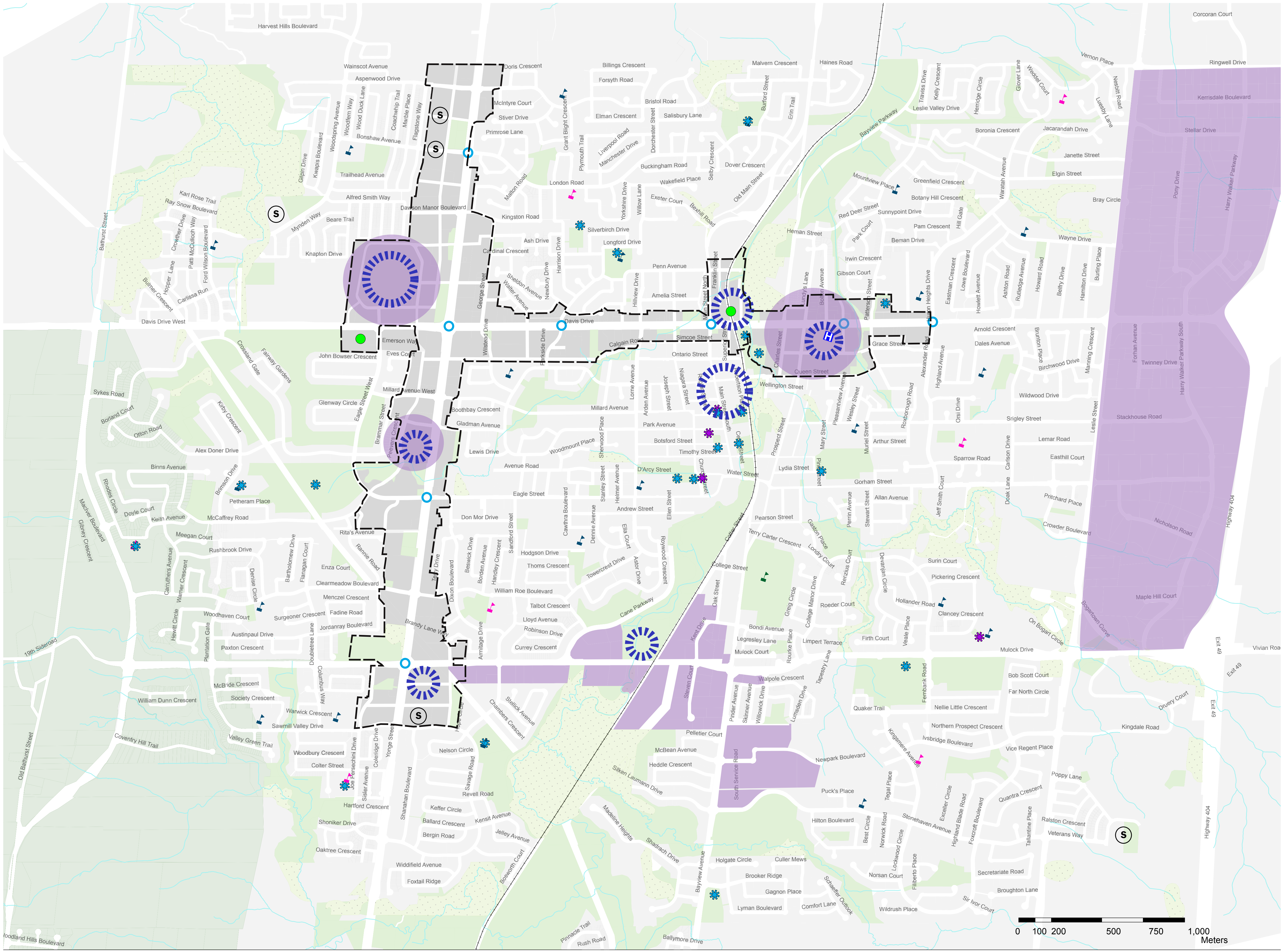


FIGURE 2:

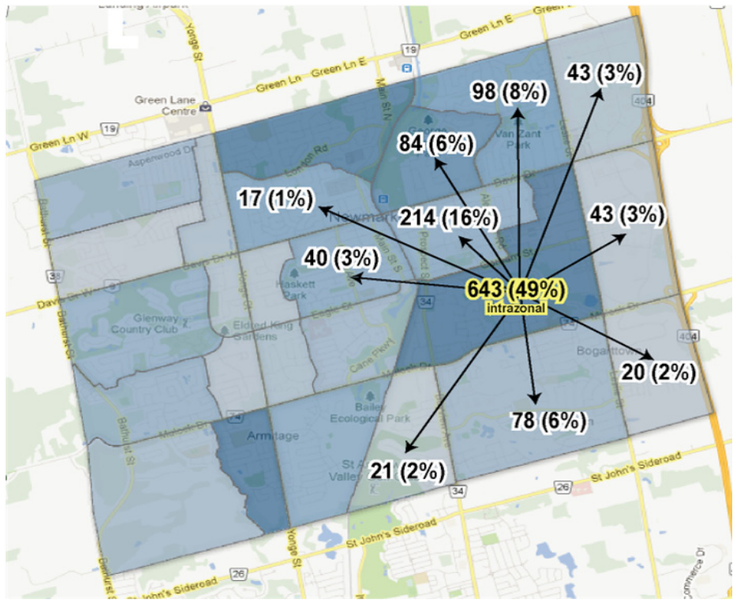
Key Origins and Destinations

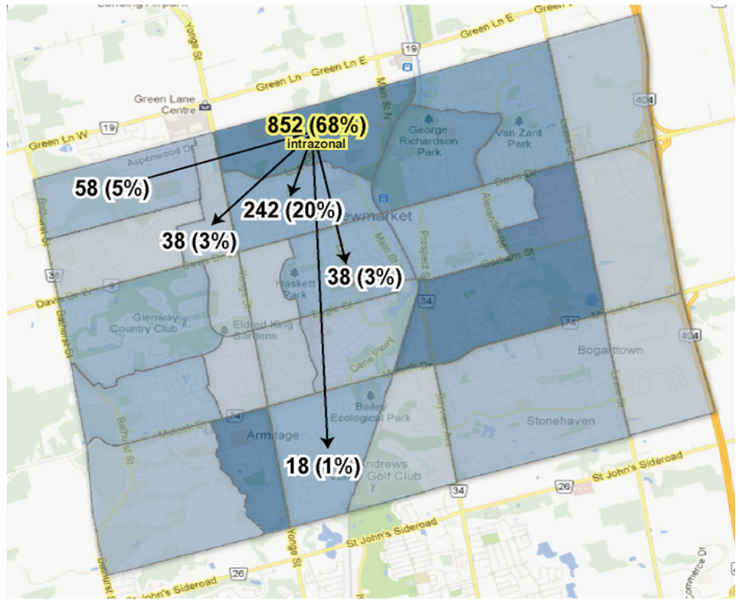
- Attractor/Generator*
- Employment Area
- Southlake Regional Healthcare Centre
- Cultural Facility
- Recreation Centre
- Public School
- Separate School
- Private School (Pickering College)
- Future School
- GO Transit Station
- Planned VIVA Rapidway Stations

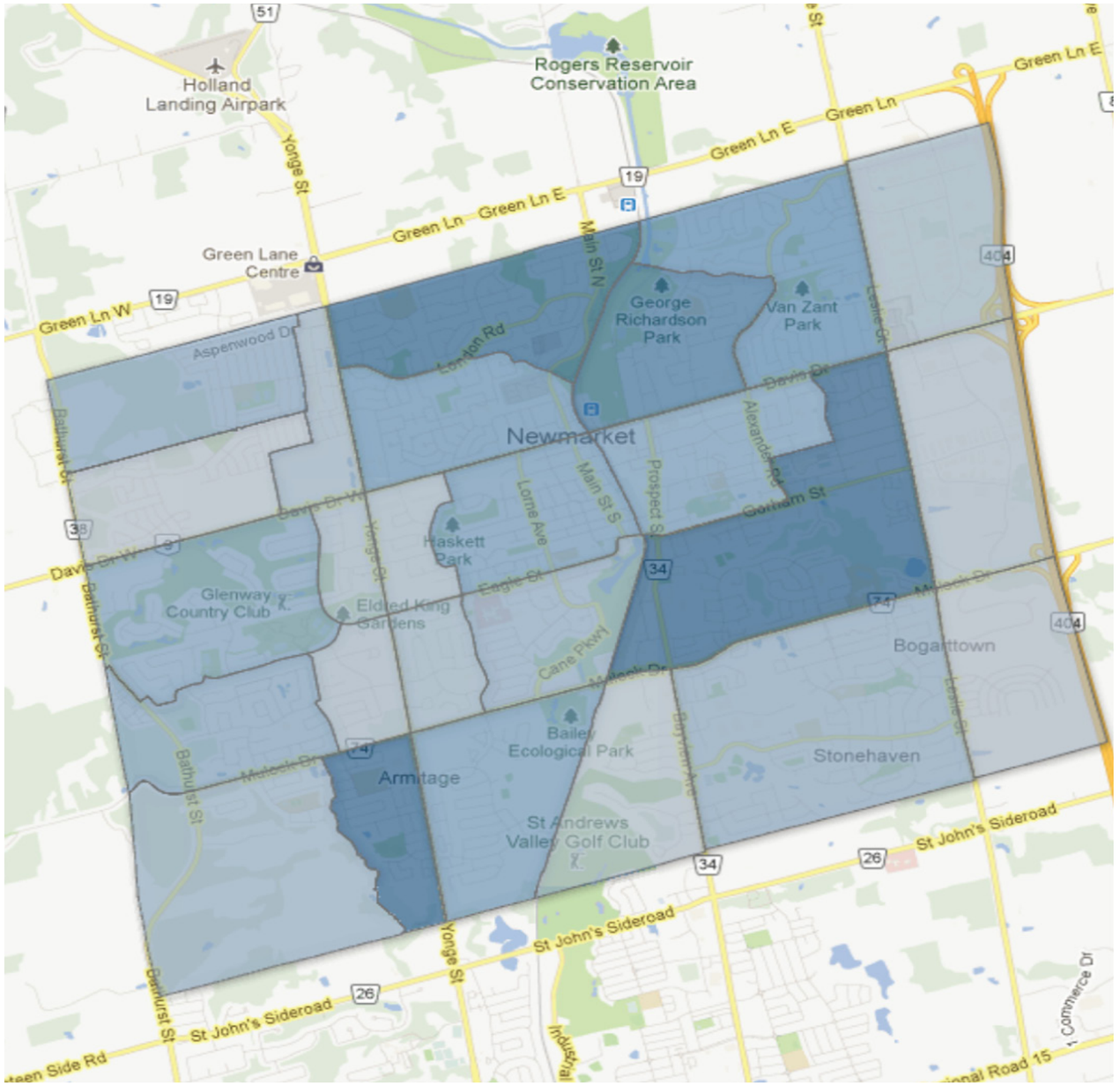
*Not based on a scale

FIGURE 3:

Walking Travel Patterns in the Town of Newmarket



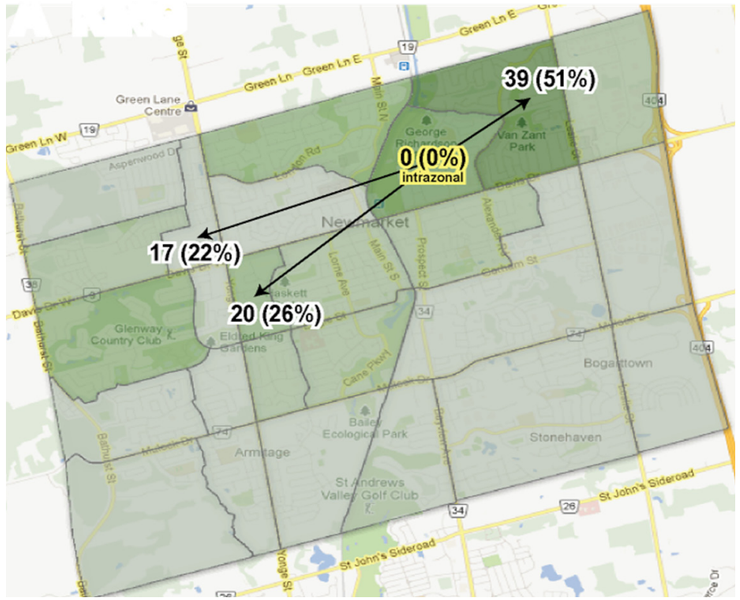


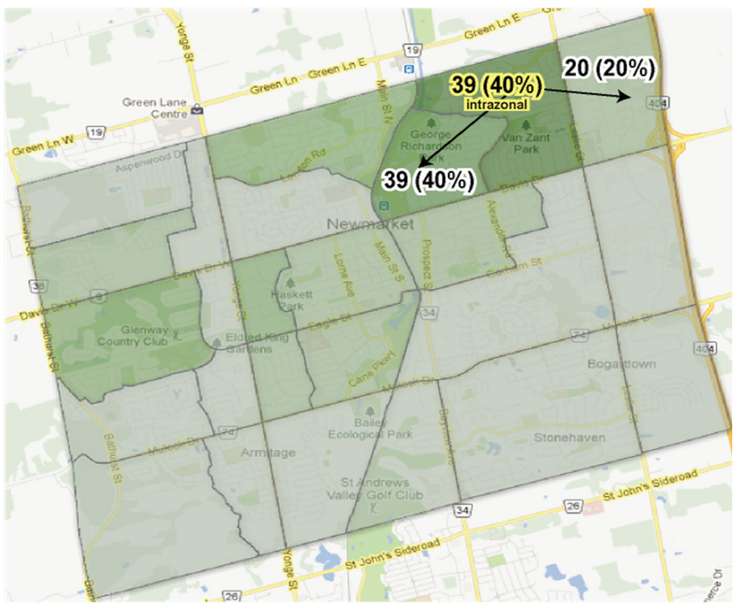


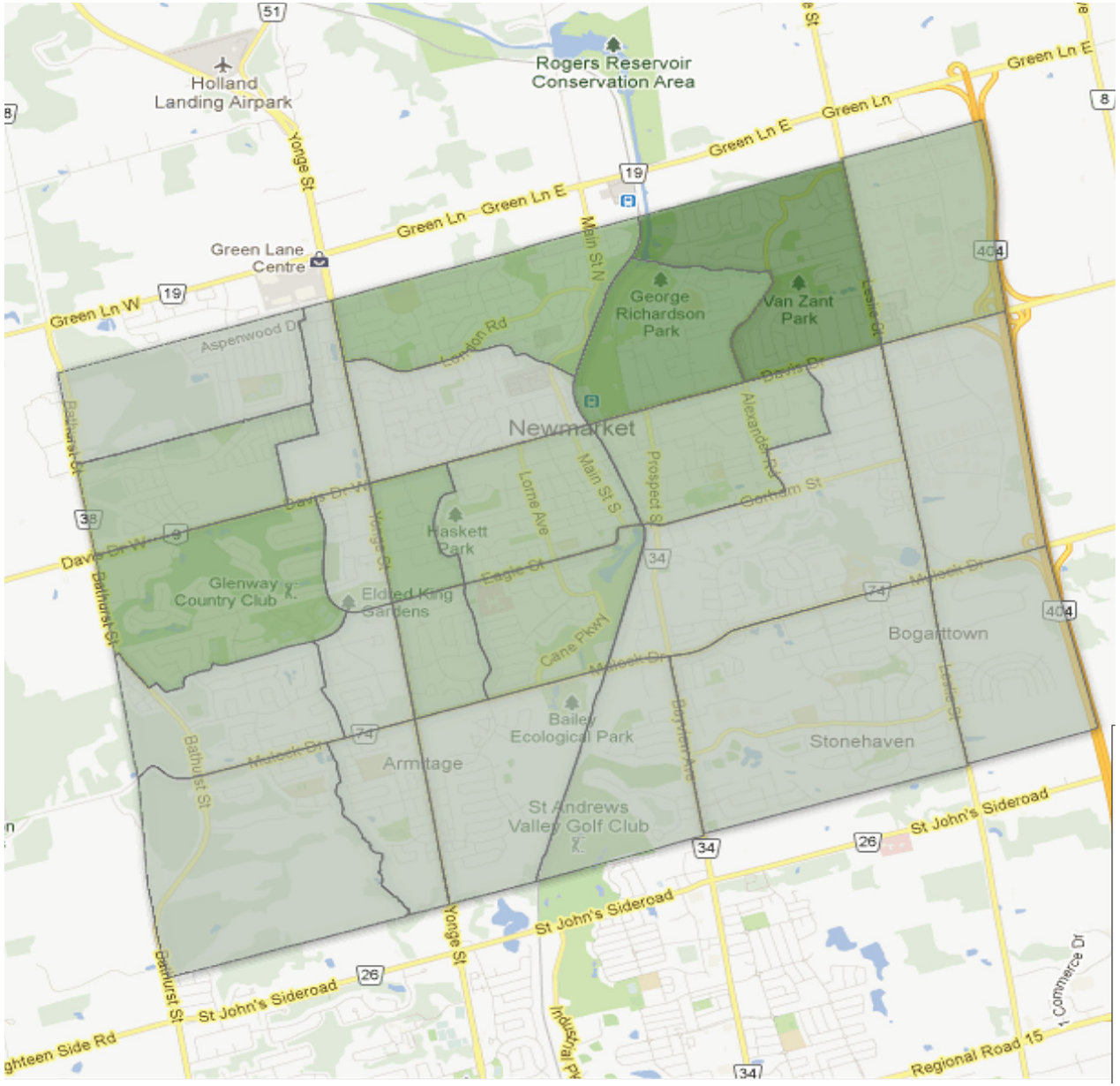
- 0 - 325 Walking Trips
- 326 - 650 Walking Trips
- 650 - 975 Walking Trips
- 975+ Walking Trips

FIGURE 4:

Cycling Travel Patterns in the Town of Newmarket







- 0 - 25 Cycling Trips
- 26 - 50 Cycling Trips
- 51 - 75 Cycling Trips
- 76+ Cycling Trips

2.3 Preferred Development Concept for the Urban Centres

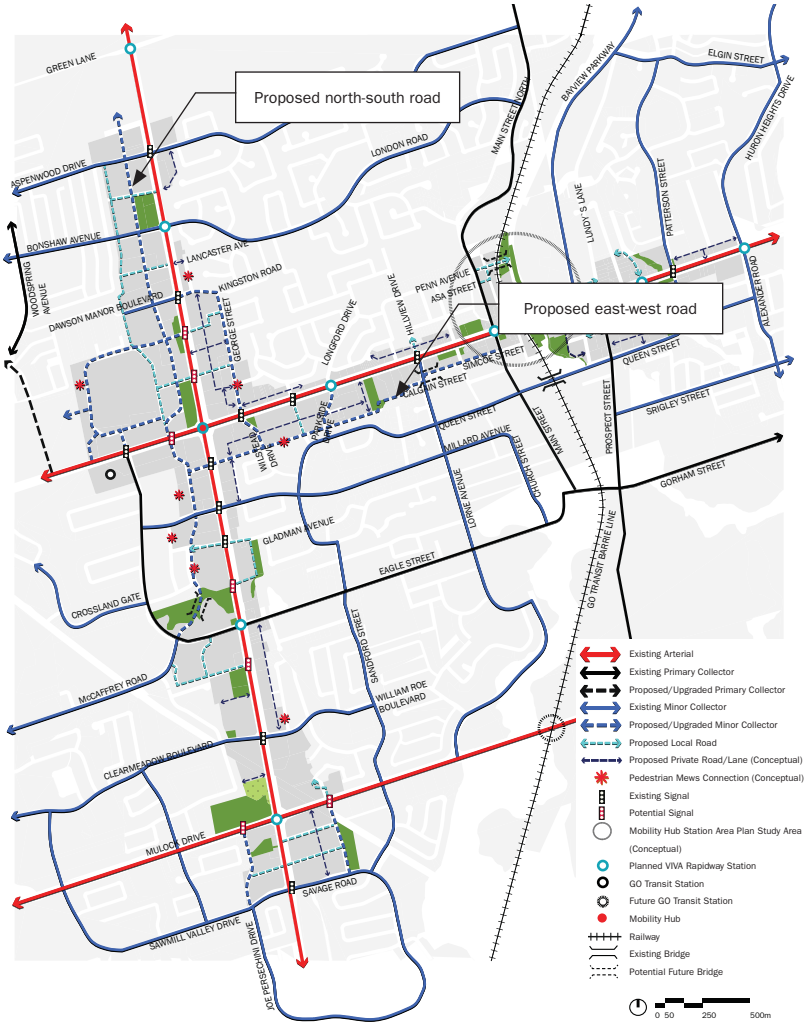
The findings outlined in Section 2.1 and 2.2 were also considered against the emerging development concept for the Urban Centres which indicates where the planned higher densities of development would be located in the future as well as a future fine-grained street network. The transportation network in the Urban Centres will support all modes of travel, with priority given to planning for active transportation and transit.

The draft Secondary Plan seeks to create a highly walkable block structure, and introduces a fine grain street network that creates more options for moving in the Urban Centres. It also aims to provide direct access to the VIVANext Rapidway stations via all transportation modes, including active transportation.

The Active Transportation network includes a number of key components within the Urban Centres itself. The network of pedestrian and cycling connections planned within the Urban Centres connects seamlessly into the broader, Town-wide active transportation network. Some of the key components within the Urban Centres include (**Figure 5**):

- Proposed north-south road west of Yonge Street; and,
- Proposed east-west road south of Davis Drive.

FIGURE 5: Draft Street Network for the Urban Centres



2.4 Summary of Consultation with Stakeholder and User Groups

Concurrently with the release of the Newmarket Urban Centres Directions Report, the Town also held public consultations on the proposed town-wide Active Transportation Network aimed at ensuring connectivity not only within the Urban Centres but also town-wide.

In May 2013, two public information meetings, a stakeholder meeting and two focus group meetings were conducted. The focus group meeting invited participates from the cycling community in Newmarket. An additional dedicated meeting with the cycling community representatives was also subsequently conducted prior to the development of the Draft Secondary Plan.

Major themes coming out of these public consultations include ensuring connectivity with neighbouring municipalities and issues with safety and connectivity/permeability, specifically for young riders. Eagle Street was identified as a heavily used east-west route and should be a priority to be made safer. Davis Drive was also identified as a route that is unsafe for cyclists. Generally, many of the existing roads, trails and paths were identified as candidates for enhanced signage and pavement markings. A need was identified to prioritize pedestrian crossings through pavement treatment and pedestrian signalization.

Participants also identified existing routes to maintain and additional connections including: Bathurst Street, Mulock Drive towards the 404, Queen Street, Millard Avenue and Srigley Street. Additional east-west connections were also identified to include outer neighbourhoods and provide for greater connectivity to the major destinations within the Town. In addition, bike lanes were proposed to be a priority around schools.

Other proposed connections included providing more bridges over railways and other physical barriers for off-road connectivity (e.g. Silken Laumann).

Based on the comments received through this consultation process, the network was revised and a recommended Active Transportation Network has been prepared for amendment into the Official Plan and is included as **Figure 6**.

STAKEHOLDER AND USER GROUP FOCUS GROUP SESSION

3 ACTIVE TRANSPORTATION NETWORK

The network identifies primary as well as secondary active transportation corridors, including both on-road and off-road linkages (**Figure 6**). These corridors are intended to function as the "spines" of the active transportation network, with dedicated lanes for cycling and a well-defined pedestrian friendly environment. The primary and secondary corridors would be supported by a tertiary network of local streets and trails that would feed the network's "spines". The Active Transportation Network includes both cycling and pedestrian facilities within the road ROW's and Off-Road (See **Appendix A** for detailed cross-sections).

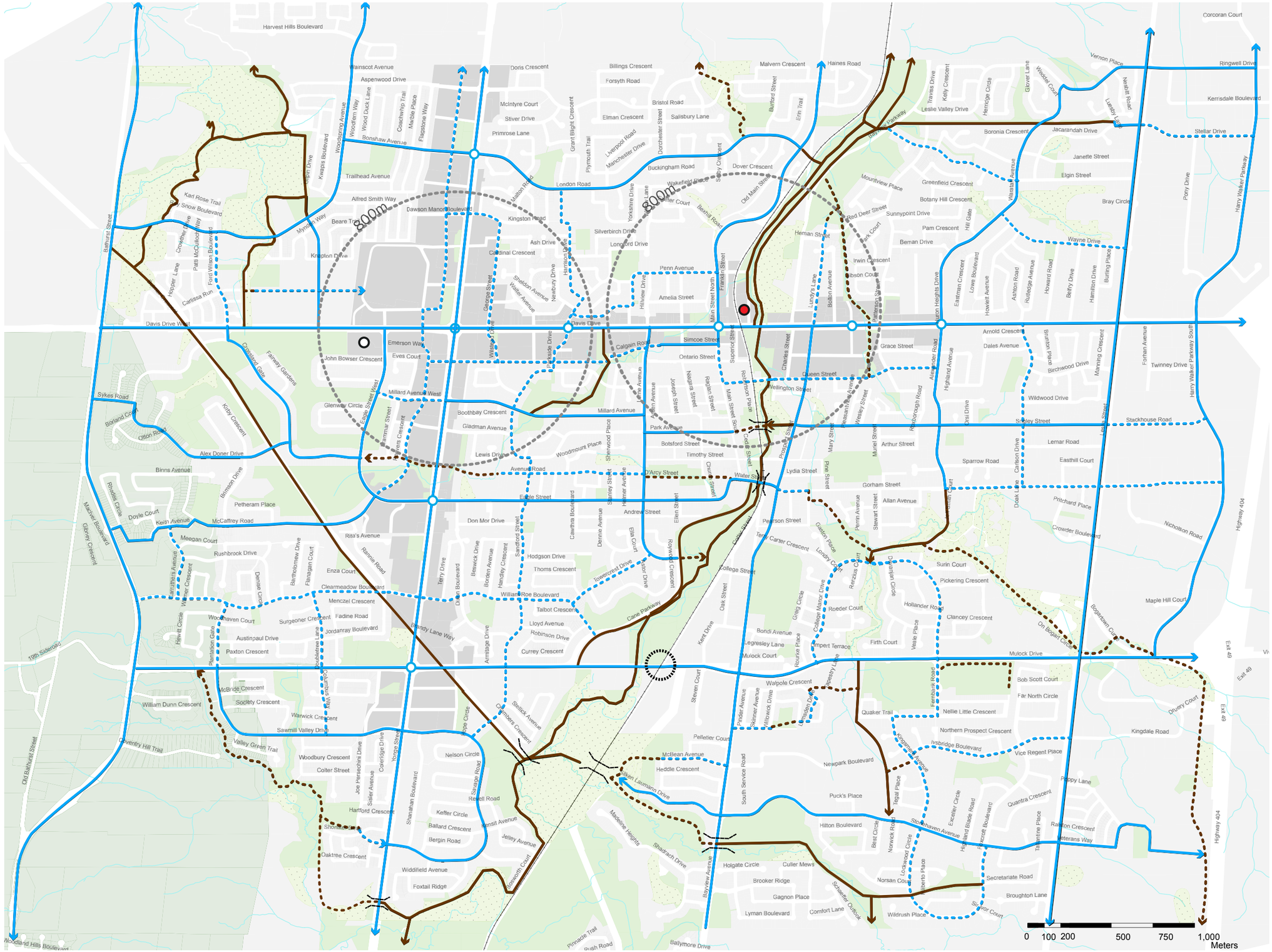
The Primary Active Transportation Network is designed to complement the regional cycling network and assist residents and employees of Newmarket to quickly and efficiently access local neighbourhood and community attractors and generators as well as transit stations. The Primary Active Transportation Network will be the highest priority for completion. Corridors identified as comprising part of the Primary Active Transportation Network within the road ROW within the Urban Centres will incorporate dedicated bike facilities that are separated from mixed traffic, preferably by grade separation or physical barriers, for the majority of their length.

The Secondary Active Transportation Network is designed to further increase accessibility to all Newmarket neighbourhoods and provide direct connections to the Primary Network. The Secondary Active Transportation Network will be the second highest priority for completion. Corridors identified as comprising part of the Secondary Active Transportation Network within the road ROW within the Urban Centres will incorporate, at minimum, on-street bike facilities.

For properties within the Urban Centres, rights-of-way required for the completion of the active transportation network shall be conveyed to the Town of Newmarket as a condition of the applicable Planning Act application or, in some cases, may be acquired by the Town and the cost of acquisition recovered through cost sharing agreements with benefitting landowners.

FIGURE 6:

Recommended Active Transportation Network



- Primary Active Transportation Network (Within the Road ROW)
- Secondary Active Transportation Network (Within the Road ROW)
- Primary Active Transportation Network (Off-Road)
- Secondary Active Transportation Network (Off-Road)
- Planned VIVA Rapidway Station
- Mobility Hub
- Future GO Transit Station
- Railway
- Potential Future Pedestrian Bridge/Underpass
- Waterbodies/Watercourses

4 PHASING AND COSTING

4.1 Active Transportation within the ROW (0 - 5 Years)

The Town has identified 15 priorities for cycling facilities within the Town's road ROW's (**Appendix B**). These are generally based on the priorities for capital projects on these roads. The estimated costs for the 0 - 5 year priorities associated with the implementation of the active transportation Network on the Town roads is summarized in **Appendix C** and total approximately $1.5 - 1.6 million.

Regional Pedestrian and Cycling Master Plan

The Regional Active Transportation Priorities are derived from the Region's Pedestrian and Cycling Master Plan (April 2008).

The undeveloped priorities include:

- Mulock Drive between Bathurst and Yonge Street
- Leslie Street between Mulock and St. John's Sideroad
- Davis Drive (between Bathurst Street and Go Bus Station)

The recommended bike lanes from the Pedestrian and Cycling Master Plan are identified in the Future Regional Road Bike Lanes under the Existing Conditions and Plans Map (**Figure 1**).

The Priority Active Transportation Network within the Regional ROW is identified in **Appendix B**.

The Region has prepared costing for infrastructure which is contained in Appendix B of the Pedestrian and Cycling Master Plan. The costs there are based on 2007 costing therefore the table indicates that the costs are to be determined (TBD).

4.2 Off-Road Active Transportation Network (0 - 5 Years)

The recommended priorities for the Off-Road Active Transportation Network (0 - 5 years) are identified in **Appendix B**.

The 0 - 5 year Off-Road Priorities are derived from the Parks Policy Development Manual (November 2012) (**Appendix D**) and the other priorities identified on **Figure 1**, with input from the community engagement process.

NEWMARKET TRAIL

The cost of these priorities are contained in **Appendix E** and summarized below:

Hydro Corridor west of Silken Laumann Drive	$5.25 million
Bathurst Forest	$812,000
Yonge Street to Ray Twinney	(To be implemented with redevelopment)
West of Toth Farm trail connection	(To be implemented with redevelopment)
Millard to Davis Drive through Haskett Park	$670,000
Lake to Lake Multi-use trail at Fairy Lake	Funds already committed
Manor Park to Gorham Street	$413,000

The overall cost of the 0 - 5 year Off-Road part of the network is to be funded by the Town and would be approximately $7.15 million.

BRIDGE ALONG TOM TAYLOR TRAIL, NEWMARKET

TRAILS ALONG A HYDRO CORRIDOR

BRIDGE ALONG TRAIL DURING WINTER, NEWMARKET

5 RECOMMENDED STUDIES

Further to this study, the following are recommended studies for further investigation into the details of the Active Transportation Network. These include a **Detailed Trail Implementation Plan** and a **Detailed Active Transportation Plan within the Right of Way**.

The **Detailed Trail Implementation Plan** would identify, as a minimum:

- The priorities of the network beyond the 10 year plan.
- The nature of the work to be carried out (which will depend on the trail and include detailed cross-sections and crossings).
- Identification of Tertiary trails and connections.
- A recommended update to Schedule E (Off Street Trails Plan).

The **Detailed Active Transportation Plan within the Right of Way** would address:

- The priorities of the network beyond the 5 year priorities.
- The nature of the work to be carried out (which will depend on the road and the width of the ROW) including detailed cross-sections.

6 AMENDMENT TO THE OFFICIAL PLAN

The draft Active Transportation Network described in Section 3.0 will be included in Amendment # 11 to the Town of Newmarket Official Plan. The amendments include text amendments to include appropriate references to the Active Transportation Network in the Official Plan as well as changes to the Official Plan Schedules. The draft Active Transportation Network will replace Schedule D (On-Street Bike Lane Plan) with a new Schedule D – Active Transportation Network, which identifies the Primary and Secondary Active Transportation Network for facilities both within the street right-of-way and off-road.

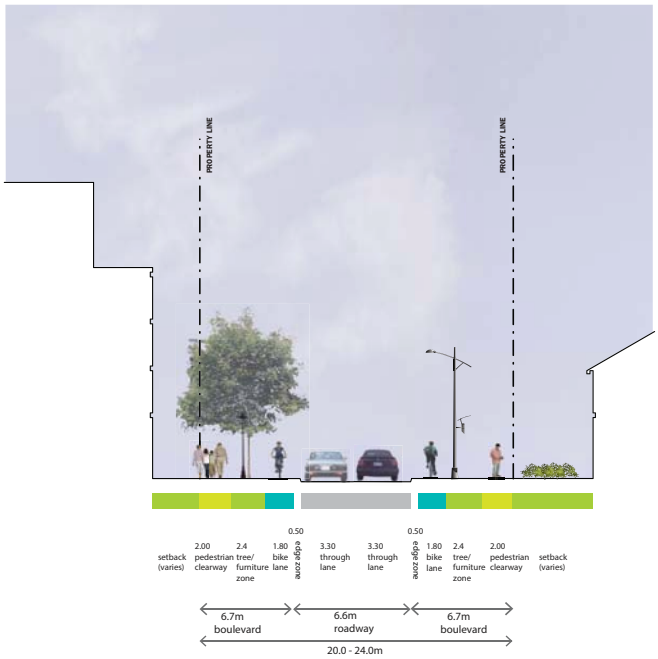
For further information regarding the text amendments please refer to Official Plan Amendment #11 which can be found on the Town's website.

APPENDIX A

Conceptual On- and Off- Street Cross Sections

LOCAL STREET CONCEPTUAL CROSS SECTION
Min 18m ROW with Sharrows

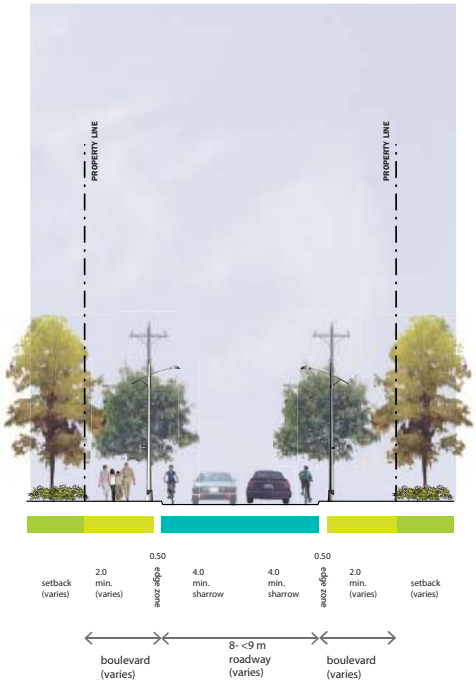
MINOR COLLECTOR CONCEPTUAL CROSS SECTION - SINGLE LOADED STREET
Min 20m ROW with Bike Lane on Boulevard



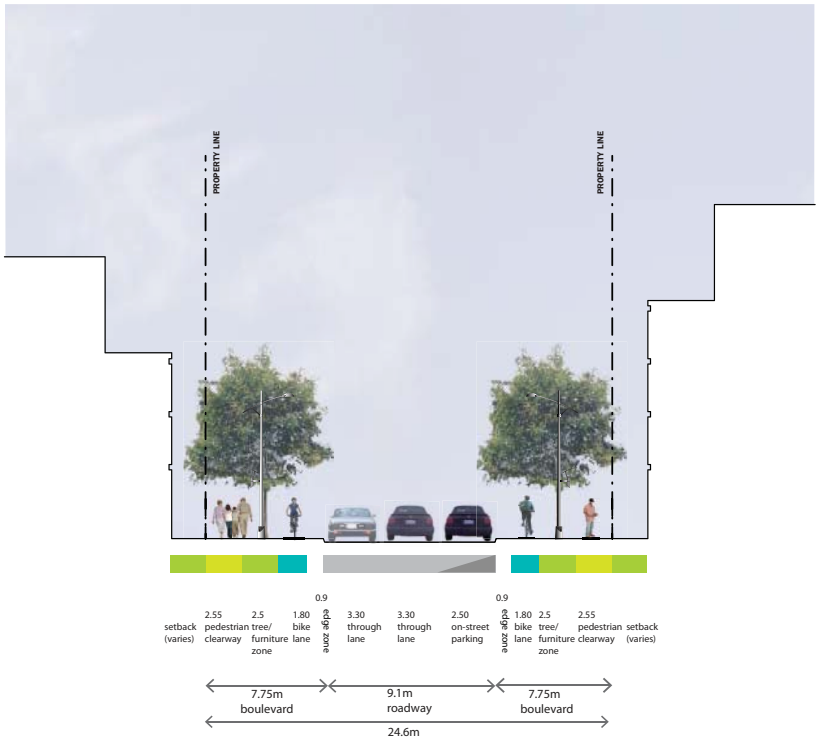
MINOR COLLECTOR CONCEPTUAL CROSS SECTION - DOUBLE LOADED STREET
Min 22m ROW with Bike Lane on Boulevard

UPGRADE TO EXISTING MINOR COLLECTOR/ ACTIVE TRANSPORATION OUTSIDE OF SECONDARY PLAN AREA
TYPICAL CROSS SECTION
18-26 m ROW (VARIES); 9-9.7 m ROADWAY

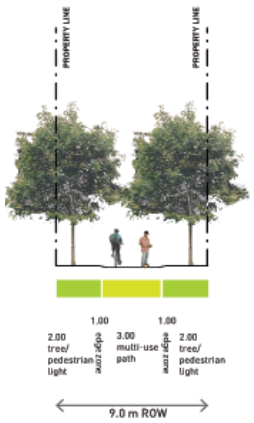
UPGRADE TO EXISTING MINOR COLLECTOR/ ACTIVE TRANSPORATION OUTSIDE OF SECONDARY PLAN AREA
TYPICAL CROSS SECTION
18-26 m ROW (VARIES); 8- <9 m ROADWAY

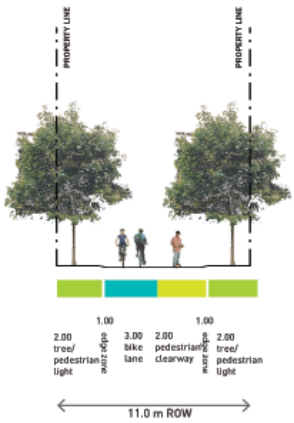


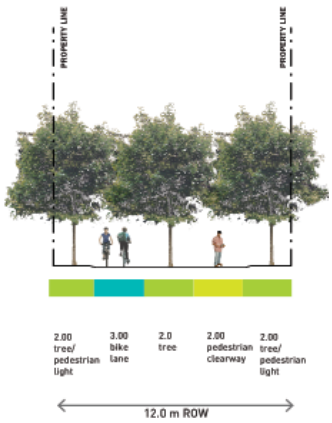
MINOR COLLECTOR CONCEPTUAL CROSS SECTION – DOUBLE LOADED STREET
Min 24.6m ROW with On-Street Parking and Bike Lane on Boulevard



TRAILS CONCEPTUAL CROSS SECTION
9 m, 11m, 12 m ROW







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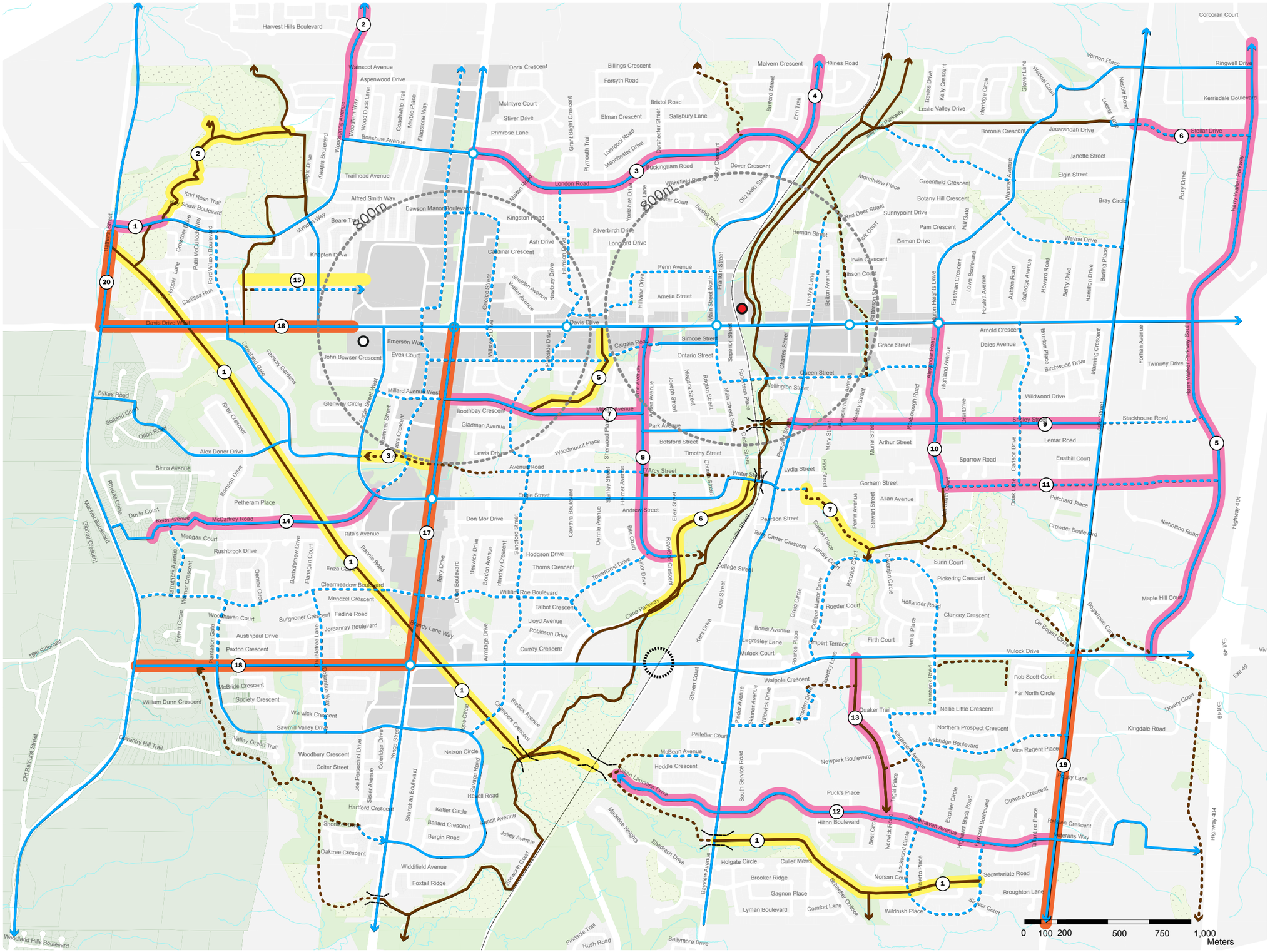
APPENDIX B

Priorities for Within the Road ROW and Off-Road Active Transportation Network (0 - 5 Years)

APPENDIX B:

Priorities for Within the Road ROW and Off-Road Active Transportation Network (0 - 5 Years)



- Primary Active Transportation Network (Within the Road ROW)
- Secondary Active Transportation Network (Within the Road ROW)
- Primary Active Transportation Network (Off-Road)
- Secondary Active Transportation Network (Off-Road)
- Region of York Priorities within the Road ROW (0 - 5 Years)
- Town of Newmarket Priorities within the Road ROW (0 - 5 Years)
- Town of Newmarket Off-Road Priorities (0 - 5 Years)
- Planned VIVA Rapidway Station
- Mobility Hub
- Future GO Transit Station
- Railway
- Potential Future Pedestrian Bridge/Underpass
- Waterbodies/Watercourses

APPENDIX C

Estimated Cost of the Priorities for the Active Transportation within Regional and Town ROW (0 - 5 Years)

Priorities for Active Transportation Facilities within the Road Right of Way (0-5 years)

Priorities on Newmarket Roads

Priority		Location	Description	Rationale	Length (m)	Timing	Estimated Cost - signs and lines	Estimated Cost - pavement and catchbasin	Estimated Cost Total	
1.	1	Woodspring	Bathurst Street to Ray Snow - 1.5m bicycle lanes both sides	completion of Woodspring bike lane to Bathurst	500	0 to 5	$14,318	$20,183	$34,500	#
2.	1	Woodspring	Bonshaw Avenue to EG - 1.5 m bicycle lane both sides and lane reduction	completion of Woodspring bike lane to Green Lane	630	0 to 5	$18,040	$25,430	$43,470	#
3.	1	London	Yonge to Main - 1.5, bicycle lane both sides	connection of Bonshaw bike lane to Tom Taylor Trail	2150	0 to 5	$62,000	$86,000	$148,000	
4.	2	Main North	London to EG - 1.5m+ bicycle lane both sides	connection to 2nd Concession project	600	0 to 5	$17,181	$24,219	$41,400	#
5.	3	Harry Walker	Mulock to Ringwell - 1.5m+ bicycle lanes both sides	core employment route	4180	0 to 5	$119,000	$167,200	$286,200	
6.	3	Stellar	Leslie to Harry Walker - 1.5m+ bicycle lanes both sides	employment area connection	950	0 to 5	$27,203	$38,347	$65,550	#
7.	4	Millard/Park	Yonge to Main - 1.5, bicycle lane both sides	core residential route to Downtown and TTT	1910	0 to 5	$54,000	$76,400	$130,400	
8.	4	Lorne	Davis to Cane Parkway - 1.5m bicycle route both sides and north to Davis Drive to connect to Hillview	parallel n/s connection	2200	0 to 5	$62,997	$88,803	$151,800	#
9.	5	Srigley	Propsect to Leslie - 1.5m bicycle lanes both sides	core residential route	2600	0 to 5	$74,451	$104,949	$179,400	#
10.	5	Alexander	Davis to Gorham - 1.5m bicycle lanes both sides	core n/s connection route	1008	0 to 5	$29,000	$40,320	$69,320	
11.	5	Gorham	Alexander to Harry Walker - 1.5m+ bicycle lanes both sides	employment area connection	1364	0 to 5	$39,000	$54,560	$93,560	
12.	6	Stonehaven	Leslie to Bayview - 1.5m bicycle lanes both sides	core residential route	2080	0 to 5	$59,561	$83,959	$143,520	#
13.	6	Fernbank/Kingsmere	Mulock to Stonehaven 1.5m bicycle lane both sides	core n/s residential	1077	0 to 5	$31,600	$43,080	$74,680	

14.	McCaffrey	Eagle St. to St. Nicholas Separate School - 1.5m bicycle lanes both sides	Connects School and residential to Yonge and Eagle	1500	0 to 5	$44,000	$60,000	$104,000
15.	Toth Farm	Pedestrian and Cycling Facilities in future Road ROW	Upper Canada Mall connection to community to the west	640	0 to 5	N/A[1]		
						$652.351	**$896,898**	**$1,565,800**

Priorities in Regional Road Right of Way

16.	Davis Dr.	Bathust to Go Bus Terminal bicycle facility and connecting residential sidewalks both sides to Go bus and Yonge St.	1500	0 to 5	TBD[2]
17.	Yonge St.	Davis Drive south the Mulock Drive. Part of the VivaNext Raised bicycle track and Yonge Street Project sidewalk planned for both sides	2060	0 to 5	NA[3]
18.	Mulock Dr.	Bathurst to Yonge St. connects residential to Transit Station and cycling facility at Yonge Street and the Greenbelt Cycling Route	1750	0 to 5	TBD[4]
19.	Leslie	Mulock to Aurora boundary connects residential and employment area	1050	0 to 5	TBD[1]
20.	Bathurst	Bathurst north of Davis to Connection to Woodspring	600	0 to 5	NA[5]

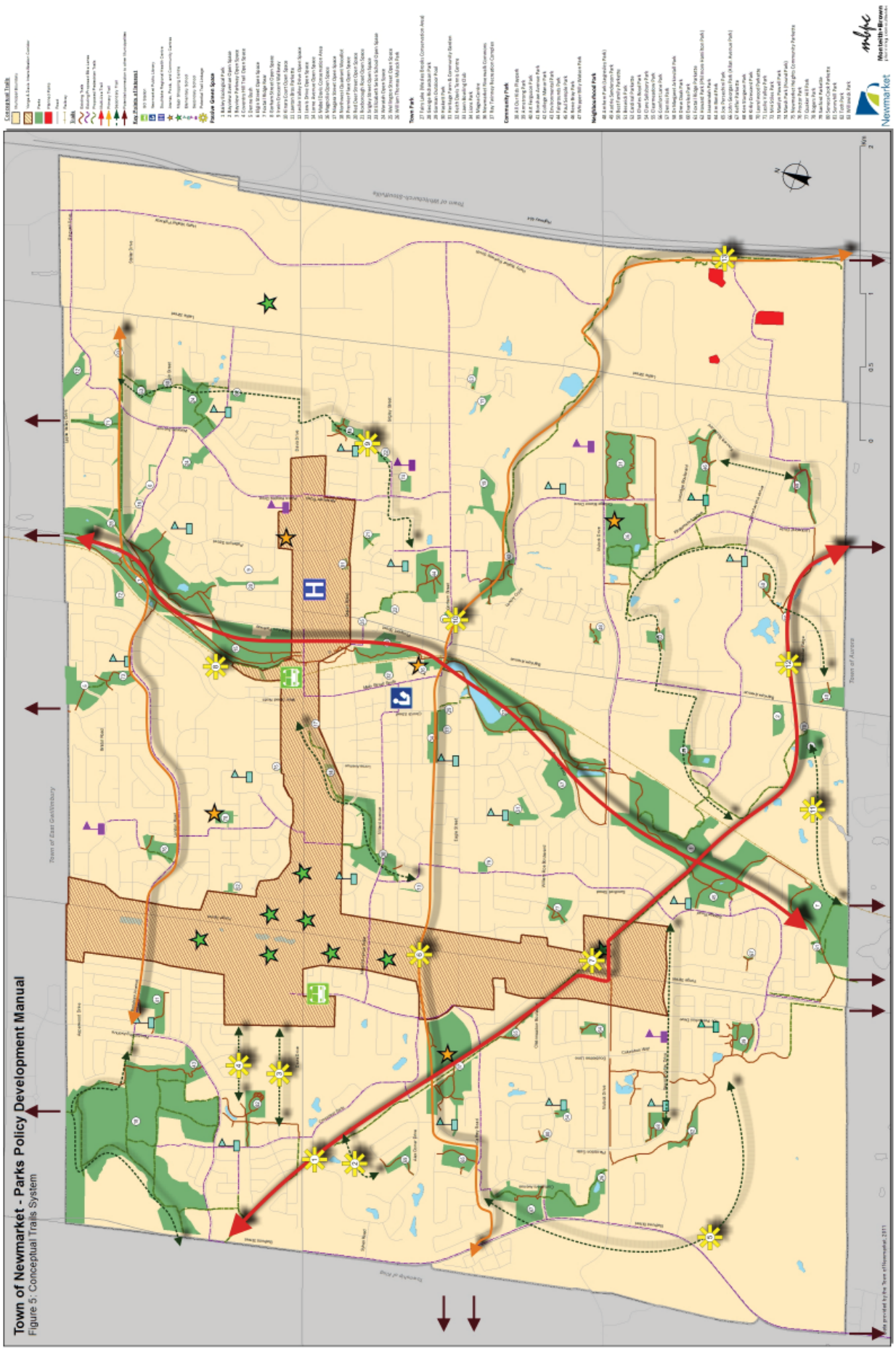
[1] Development of the Active Transportation facilities are intended to be incorporated into future street ROW at the expense of the developer
[2] Cost based on 1.5 m cycle track on both sides of the road @ $90.00 per linear metre, cost does not include design. If cycling facility is designed to be part of the boulevard, the cost may be borne by the adjacent developers or the Town.
[3] Cost of cycling facility is part of the vivaNext project
[4] Cost based on 1.5 metre cycle track on both sides @ $90 per metre or alternatively, if the cycling facility is located in part in the Blvd. cost would be higher and borne by the Town.
[5] Town has already committed funding for this project.

APPENDIX D

Excerpts from the Parks Policy Manual:

- Figure 5 Conceptual Trails System
- Page 23 - Costing/Timeline Table

Parks Policy Development Manual Excerpt:
Figure 5 Conceptual Trails System



Parks Policy Development Manual Excerpt:

Page 23 - Costing/Timeline Table

Trail Link #	Trail Location	Suggested Timing	Surface Material	Approx. Length	Approx. Cost
Multi-Use Pathway – Hydro Corridor					
1	Davis Drive mid-block connection to link to Ray Twinney Complex via Alex Donner Dr. and golf course.	0-5 years	Asphalt	320 metres	$ 188,800
2	Kirby Crescent Park to Multi-Use Pathway	0-5 years	Asphalt	670 metres	$ 395,300
7	Mid-block connection at the intersection of Yonge St. and Mulock Dr. to link Ray Twinney Complex and Paul Semple Park. Proposed route utilizes existing arterial sidewalks or boulevard path.	0-5 years	Asphalt (blvd. path)	440 metres	$ 222,200
12	Large linkage between Paul Semple Park and Best Family Parkette, generally following riparian corridor via Bayview Ave. Open Space.	0-5 years	Compacted Granular	583 metres	$ 265,265
n/a	Northwest Quadrant Woodlot trails	0-5 years	TBD	TBD	TBD
				Subtotal Cost	***$1,071,565***
Primary Trail - Central					
6	Mid-block connection on Yonge St., north of Eagle St. connecting Ray Twinney Complex to Lions Park via York Region Administrative Centre and Avenue Road.	0-5 years	Asphalt (excl. Avenue Rd. sidewalk)	870 metres	$ 222,950
10	Linkage between College Manor Park and Gorham Street, following a riparian corridor.	0-5 years	Compacted Granular	250 metres	$ 108,750
13	Gap in the Copper Hills subdivision, west of Hwy. 404	0-5 years	Asphalt	140 metres	$ 68,600
				Subtotal Cost	***$400,300***
Secondary Trails					
3	Boulevard path along Davis Dr. linking Upper Canada Mall and Ford Wilson Blvd.	0-5 years	Asphalt	660 metres	$ 237,600
4	Path within future development connecting Toth Park to Upper Canada Mall	5-10 years	Asphalt	450 metres	$ 202,500
5	Represents potential connection(s) to Oak Ridges Trail	5-10 years	Compacted Granular	2,500 metres	$ 1,037,500
8	Potential grade separated crossing at George Richardson Park	5-10 years	TBD through future study	TBD through future study	TBD through future study
9	Connections between Srigley St. Open Space and Drew Doak Park, as well as between Fairgrounds Park and Sparrow Rd.	0-5 years	Asphalt	380 metres	$ 171,000
11	Linkage between Laurelwood Parkette/Kinara Crt. Open Space and planned connection in Aurora, via riparian corridor	5-10 years	Compacted Granular	1,200 metres	$ 498,000
				Subtotal Cost	***$2,146,600***
				Total Cost – 0-5 years	**$ 1,880,465**
				Total Cost – 5-10 years	**$1,738,000**
				Total Development Cost	**$ 3,618,465**

Note: does not include pedestrian bridge crossings or cost of land (the latter of which is important, particularly for the hydro corridor where significant rents are currently being charged for trails; assumes road works for mid-block crossings are by others; total estimated costs are quoted in 2012 Canadian dollars based upon per linear metre assumptions appended to this Manual.

APPENDIX E

Estimated Cost of the Priorities for the Off-Road Active Transportation Network (0 - 5 Years)

Priorities for Off-Road Active Transportation Facilities (0-5 years)

Trail Link	Parks Manual Priority	Trail Location	Suggested Timing	Rationale	Approximate Length	Approximate Cost	Notes/Comments
1	Trail Link # 1, 7, 12 (0-5 Years)	Multi-use path in Hydro ROW - Bathurst to Silken Laumann Drive and Bayview to Lockwood Circle. This Trail would also require a new bridge/underpass at the Holland River and CN Rail.	0-5 years (priority sections to be determined)	Key off road E/W off road linkage through the Town	5,775 m	**$5,253,296.40**	

Item	Quantity	Units	Unit cost	Total Cost
Consulting Fees (Design and Contract Admin)	5775	Linear Meter	$105.00	$606,375.00
Survey and Geotechnical (Basic Survey and Soil Report)	5775	Linear Meter	$25.00	$144,375.00
Landscaping	5775	Linear Meter	$120.00	$693,000.00
LED Lighting	5775	Linear Meter	200	$1,155,000.00
3 meter Asphalt Trail	5775	Linear Meter	159	$918,225.00
2 meter Designated Asphalt Bike Trail	4500	Linear Meter	106	$477,000.00
Topsoil and Sod	20550	Square Meter	8	$164,400.00
Earth Excavation and Grading	5775	Linear Meter	30	$173,250.00
Tree Removals and Grubbing	1	Lump Sum	16000	$16,000.00
Benches with concrete pad	28	Each	2000	$56,000.00
Waste Triceptacles with Concrete Pad	22	Each	3500	$77,000.00
Sets of P-Gates	27	Each	2500	$67,500.00
Pedestrian Bridge with foundations and abuttments over Holland River	1	Each	90000	$90,000.00
pedestrian Bridge with foundations and Abuttments over small river/stream.	1	Each	40000	$40,000.00
Allance for Retention Walls	1	Lump Sum	15000	$15,000.00
Railway Crossing	**1**	**Each**	**To Be Determined**	**To Be Determined**
Land and/or Lease Cost	**5775**	**Linear Meter**	**To Be Determined**	**To Be Determined**
Subtotal				$4,693,125.00
10 % Contigency				$469,312.50
1.76% Tax				$90,858.90
Total Project Budget				$5,253,296.40

2	Not Identified	Peggy's Woods and Bathurst Area Forest Management Plan Multi-use trail (possible bridge)	0-5 years	Key Linkage between residential area woodspring Ave and Davis Drive	1200 m	**$811,536.00**

Item	Quantity	Units	Unit cost	Total Cost
Consulting Fees (Design and Contract Admin)	1200	Linear Meter	$105.00	$126,000.00
Survey and Geotechnical (Basic Survey and Soil Report)	1200	Linear Meter	$25.00	$30,000.00
Landscaping	1	Lump Sum	$80,000.00	$80,000.00
LED Lighting	NA	NA	NA	NA
3 meter Asphalt Trail	1200	Linear Meter	159	$190,800.00
2 meter Designated Asphalt Bike Trail	NA	NA	NA	NA
Topsoil and Sod	2400	Square Meter	8	$19,200.00
Earth Excavation and Grading	1200	Linear Meter	30	$36,000.00
Tree Removals and Grubbing	1	Lump Sum	40000	$40,000.00
Benches with concrete pad	6	Each	2000	$12,000.00
Waste Triceptacles with Concrete Pad	6	Each	3500	$21,000.00
Sets of P-Gates	6	Each	2500	$15,000.00
Pedestrian Bridge with foundations and abuttments over Holland River	NA	NA	NA	NA
pedestrian Bridge with foundations and Abuttments over small river/stream.	1	Each	80000	$80,000.00
Allowance for Retentions Walls	1	Lump Sum	75000	$75,000.00
Subtotal				$725,000.00
10 % Contigency				$72,500.00
1.76% Tax				$14,036.00
Total Project Budget				$811,536.00

3	Trail Link # 6 (0-5 Years) to Lion's Park	Multi-use trail connecting Ray Twinney Recreational Complex to Yonge Street.	0-5 Years	Key east west AT Connection	500 m	**$413,603.52**	To be developed in conjunction with the development on the York Region Lands.

Item	Quantity	Units	Unit cost	Total Cost
Consulting Fees (Design and Contract Admin)	500	Linear Meter	$105.00	$52,500.00
Survey and Geotechnical (Basic Survey and Soil Report)	500	Linear Meter	$25.00	$12,500.00
Landscaping	500	Linear Meter	$120.00	$60,000.00
LED Lighting	NA	NA	NA	NA
3 meter Asphalt Trail	500	Linear Meter	159	$79,500.00
2 meter Designated Asphalt Bike Trail	NA	NA	NA	NA
Topsoil and Sod	1000	Square Meter	8	$8,000.00
Earth Excavation and Grading	500	Linear Meter	30	$15,000.00
Tree Removals and Grubbing	1	Lump Sum	20000	$20,000.00
Benches with concrete pad	5	Each	2000	$10,000.00
Waste Triceptacles with Concrete Pad	2	Each	3500	$7,000.00
Sets of P-Gates	2	Each	2500	$5,000.00
Pedestrian Bridge with foundations and abuttments over Holland River	1	Each	60000	$60,000.00
pedestrian Bridge with foundations and Abuttments over small river/stream.	NA	NA	NA	NA
Allowance for Retention Walls	1	Lump Sum	40000	$40,000.00
Subtotal				$369,500.00
10 % Contigency				$36,950.00
1.76% Tax				$7,153.52
Total Project Budget				$413,603.52

4	Trail Link # 4 (0-5 years)	Connection through the Toth Farm to Upper Canada Mall and Yonge Street	0-5 years	East/west connection to be provided in conjunction with the development of the Toth Farm.	650 m	**$344,622.96**	To be developed in conjunction with the Toth Farm development application

Item	Quantity	Units	Unit cost	Total Cost
Consulting Fees (Design and Contract Admin)	1	Lump Sum	$40,000.00	$40,000.00
Survey and Geotechnical (Basic Survey and Soil Report)	1	Lump Sum	$5,000.00	$5,000.00
Landscaping	1	Lump Sum	$45,000.00	$45,000.00
LED Lighting	NA	NA	NA	NA
3 meter Asphalt Trail	85	Linear Meter	159	$13,515.00
2 meter Designated Asphalt Bike Trail	NA	NA	NA	NA
Topsoil and Sod	170	Square Meter	8	$1,360.00
Earth Excavation and Grading	1	Lump Sum	10000	$10,000.00
Tree Removals and Grubbing	1	Lump Sum	2000	$2,000.00
Benches with concrete pad	2	Each	2000	$4,000.00
Waste Triceptacles with Concrete Pad	2	Each	3500	$7,000.00
Sets of P-Gates	2	Each	2500	$5,000.00
Pedestrian Bridge with foundations and abuttments over Holland River	NA	NA	NA	NA
pedestrian Bridge with foundations and Abuttments over wide drainage channel 25- 30m wide.	1	Lump Sum	125000	$125,000.00
Allowance for Retention Walls	1	Lump Sum	50000	$50,000.00
Subtotal				$307,875.00
10 % Contigency				$30,787.50
1.76% Tax				$5,960.46
Total Project Budget				$344,622.96

5	Not identified	Millard to Davis Drive through Haskett Park (one new bridge and/or bridge upgrades may be required)	0-5 years	Mid-Block off-road connection between Millard and Davis Drive	850 m	**$669,097.44**

Item	Quantity	Units	Unit cost	Total Cost
Consulting Fees (Design and Contract Admin)	850	Linear Meter	$105.00	$89,250.00
Survey and Geotechnical (Basic Survey and Soil Report)	850	Linear Meter	$25.00	$21,250.00
Landscaping	850	Linear Meter	$120.00	$102,000.00
LED Lighting	NA	NA	NA	NA
3 meter Asphalt Trail	850	Linear Meter	159	$135,150.00
2 meter Designated Asphalt Bike Trail	NA	NA	NA	NA
Topsoil and Sod	1700	Square Meter	8	$13,600.00
Earth Excavation and Grading	850	Linear Meter	30	$25,500.00
Tree Removals and Grubbing	1	Lump Sum	35000	$35,000.00
Benches with concrete pad	10	Each	2000	$20,000.00
Waste Triceptacles with Concrete Pad	6	Each	3500	$21,000.00
Sets of P-Gates	6	Each	2500	$15,000.00
Pedestrian Bridge with foundations and abuttments over Holland River	NA	NA	NA	NA
pedestrian Bridge with foundations and Abuttments over small river/stream.	1	Lump Sum	60000	$60,000.00
Allowance for Retention Walls	1	Lump Sum	60000	$60,000.00
Subtotal				$597,750.00
10 % Contigency				$59,775.00
1.76% Tax				$11,572.44
Total Project Budget				$669,097.44

6	Lake to Lake Multi Use Trail Connection at Fairy Lake	York Region Lake to Lake Cycling and Walking Trail around Fairy Lake Between Water Street to connect to the Tom Taylor Trail adjacent to Cane Parkway. A grade separated crossing of water street south of River Walk Commons would also be necessary in the longer term.	0-5 years	Key Connecting link around Fairy Lake subject to Development & Infrastructure Services Report - Engineering Services 2013-05	1200 m	**$742,745.73**	Final Cost to be determined and subject to cost sharing with the Region. Potential brdige/underpass to be determined for crossing Water Street.

Item	Quantity	Units	Unit cost	Total Cost
Consulting Fees (Design and Contract Admin)	1	Lump Sum	$56,800.00	$56,800.00
Survey and Geotechnical (Basic Survey and Soil Report)	1	Lump Sum	$10,000.00	$10,000.00
Landscaping	1	Lump Sum	$35,395.00	$35,395.00
Landscape Site Elements	1	Lump Sum	195300	$195,300.00
3 meter Asphalt Trail	1	Lump Sum	220000	$220,000.00
2 meter Designated Asphalt Bike Trail	NA	NA	NA	NA
Topsoil and Sod	1	Lump Sum	12200	$12,200.00
Earth Excavation, Grading, and Site Preparatioin	1	Lump Sum	61250	$61,250.00
Grade Separated Crossing	1	Lump Sum	To Be Determined	To Be Determined
pedestrian Bridge with foundations and Abuttments over small river/stream.	1	Lump Sum	72000	$72,000.00
Permits	1	Lump Sum	600	$600.00
Subtotal				$663,545.00
10 % Contigency				$66,354.50
1.76% Tax				$12,846.23
Total Project Budget				$742,745.73

7	Trail Link #10 (0-5 years)	Link between Manor Park and Gorham Street	0-5 years	Key east/west connection to Main Street and Historic Downtown	400 m	**$413,043.84**

Item	Quantity	Units	Unit cost	Total Cost
Consulting Fees (Design and Contract Admin)	400	Linear Meter	$105.00	$42,000.00
Survey and Geotechnical (Basic Survey and Soil Report)	400	Linear Meter	$25.00	$10,000.00
Landscaping	1	Lump Sum	$65,000.00	$65,000.00
LED Lighting	NA	NA	NA	NA
3 meter Asphalt Trail	400	Linear Meter	159	$63,600.00
2 meter Designated Asphalt Bike Trail	NA	NA	NA	NA
Topsoil and Sod	800	Square Meter	8	$6,400.00
Earth Excavation and Grading	400	Linear Meter	30	$12,000.00
Tree Removals and Grubbing	1	Lump Sum	45000	$45,000.00
Benches with concrete pad	4	Each	2000	$8,000.00
Waste Triceptacles with Concrete Pad	2	Each	3500	$7,000.00
Sets of P-Gates	2	Each	2500	$5,000.00
Pedestrian Bridge with foundations and abuttments over Holland River	NA	NA	NA	NA
pedestrian Bridge with foundations and Abuttments over small river/stream.	1	Lump Sum	65000	$65,000.00
Allowance for Retention Walls	1	Lump Sum	40000	$40,000.00
Subtotal				$369,000.00
10 % Contigency				$36,900.00
1.76% Tax				$7,143.84
Total Project Budget				$413,043.84