

# Appendix F: Alternative Improvements

## Purpose

This appendix summarizes improvements included in each alternative, which includes projects developed through the problem identification process described within the main report. Four alternatives were developed: Business-as-Usual (BAU), Green, New Roads, and Multi-Modal. This appendix begins by listing projects in BAU, which is the foundation for the remainder of the alternatives, then listing additional projects in each alternative through subsequent sections.

## Projects in Business-as-Usual (BAU) Alternative

The BAU alternative serves as the foundation network for other alternatives, and as a basis for comparisons in terms of evaluation metrics. It is composed of planned road and transit improvements from the City, York Region, and provincial agencies that were identified as having an impact on the City’s transportation network and high priority. Road projects in this alternative are presented in **Table 1**, and transit projects in this alternative are presented in **Table 2**.

**Table 1: Road Projects in BAU**

Project	From	To	Improvement
Applemill Road	Applewood Crescent	Jane Street	4-lane extension
Applewood Crescent	Portage Parkway	Highway 7	4-lane extension
Barnes Court	Maplecrete Road	Creditstone Road	2-lane extension / improvements
Bass Pro Mills	Highway 400	Weston Road	New road
Bass Pro Mills	Romina Drive	Jane Street	New road
Bathurst Street	Autumn Hill Boulevard	Major Mackenzie Drive	6-lane Widening
Block 27 Collector Road Network	Block 27	Block 27	New road
Block 27 Street 2	Street 6	Street 8	Grade Separated Rail Crossing
Block 34 Collector Road Network	Block 34	Block 34	New road network
Block 35 Collector Road Network	Block 35	Block 35	New road
Block 41 Collector Road Network	Block 41	Block 41	New road
Block 59 North/South Collector Road Network	Block 59	Block 59	New road
Block 60 Collector Road Network (McGillivray Road)	Block 60	Block 60	New road
Block 60 East Collector Road	Block 60 East	Block 60 East	New road



Project	From	To	Improvement
Network (Residential)			
Caldari Road	Riverock Gate	Rutherford Road	New road
Canada Dr/America Ave Midblock Connector	Weston Road	Jane Street	New road
Commerce Street	Applemill Road	Exchange Avenue	2-lane extension
Creditstone Road	Peelar Road	Rutherford Road	Improvement / 4-lane widening
Doughton Road	Commerce Way	Creditstone Road	2-lane extension / improvements
Dufferin Street	Major Mackenzie Drive	Teston Road	4-lane widening
Dufferin Street	Langstaff Road	Rutherford Road	6-lane widening
Edgeley Boulevard	Portage Parkway	Exchange Avenue	Extension / Improvement
Highway 27	Major Mackenzie Drive	North City limits	4-lane widening
Highway 50	Rutherford Road	GTA West	6-lane widening
Highway 50	Steeles Avenue	Highway 7	6-lane widening
Highway 7	Kipling Avenue	Helen Street	6-lane widening
Huntington Road	Langstaff Road	Nashville Road	New Road and Road improvements
Huntington Road	Nashville Road	Kirby Road	Road improvements
Huntington Road - 427 Ramp Extension	Major Mackenzie Drive	Huntington Road	4-lane off-ramp extension
Huntington Road CP Rail Crossing North of Nashville Rd	CP Rail Line	CP Rail Line	Grade Separated Rail Crossing
Interchange Way	Highway 400	Creditstone Road	New road / 4-lane widening
Jane Street	Teston Road	King-Vaughan Road	4-lane widening
John Lawrie Street	Huntington Road	Highway 27	New road
Keele Street	Steeles Avenue	Highway 407	6-lane widening
Keele Street	Highway 7	Rutherford Road	6-lane widening
Kirby GO Station Road Network / Vista Gate Extension	Keele Street	GO Station	New road
Kirby Road	Street 6	Keele Street	Grade Separated Rail Crossing
Kirby Road	Jane Street	Dufferin Street	4-lane widening
Kirby Road	Dufferin Street	Bathurst Street	4-lane extension
Kirby Road	Weston Road	Jane Street	4-lane widening
Kirby Road	Highway 27	Weston Road	Reconstruction



Project	From	To	Improvement
Kleinburg-Nashville Focus Area Collector Network	Block 62/55	Block 62/55	New road network
Langstaff Road	Weston Road	Dufferin Street	6-lane extension & widening
Major Mackenzie Drive	Highway 400	Jane Street	6-lane widening
Major Mackenzie Drive	Huntington Road	Pine Valley Drive	6-lane widening
Maplecrete Road	Portage Parkway	Barnes Court	2-lane extension / new road
Maplecrete Road	Highway 7	Peelar Road	2-lane extension / widening
McGillivray Road	CP Rail Line	CP Rail Line	Grade Separated Rail Crossing
McNaughton Road at Barrie GO Rail	Falvo Street	Troon Avenue	Grade Separated Rail Crossing
McNaughton Road Improvements (West of Keele Street)	Major Mackenzie Drive	Keele Street	Improvements / widening (# of lanes TBD)
Millway Avenue (North)	Highway 7	Portage Parkway	Realignment/improvements/4-lane widening
Millway Avenue (South)	Highway 7	Peelar Road	4-lane extension
Nashville Road CP Rail Crossing east of Huntington	CP Rail Line	CP Rail Line	Grade Separated Rail Crossing
Ortona Court	Rivermede Rd	340M South Rivermede	2-lane widening
Ortona Court	490M South Rivermede	Highway 7	New road
Ortona Court	340M South Rivermede	490M South Rivermede	New road
Peelar Road / Exchange Avenue	Commerce Way	Creditstone Road	2-lane extension / improvements
Pine Valley Drive	Rutherford Road	Teston Road	4-lane widening
Pinewood Drive Extension	Powell Road	Yonge Street	New road
Portage Parkway	Highway 400	Jane Street	4-lane extension
Portage Parkway	Jane Street	Creditstone Road	4-lane extension
Primary East West Collector (Steeles Avenue West Secondary Plan)	Jane Street	Keele Street	4-lane new road
Promenade Secondary Plan - Collector Road Network	Promenade Circle	Promenade Circle	New road network
Rivermede Road at Barrie GO Rail *	Bowes Road	Ortona Court	Grade Separated Rail Crossing
Riverrock Gate	Jane Street	Caldari Road	2-lane widening
Royal Palm Drive Extension	Hilda Avenue	Yonge Street	New road
Rutherford Road	Jane Street	Bathurst Street	6-lane widening

Project	From	To	Improvement
Snidercroft Road CP Rail Crossing	CP Rail Line	CP Rail Line	Grade Separated Rail Crossing
Teston Road	Pine Valley Drive	Weston Road	4-lane widening
Teston Road	Dufferin Street	Bathurst Street	4-lane widening
Thomas Cook Avenue	Lebovic Campus Drive	Major Mackenzie Drive	2-lane extension
Vellore Woods Boulevard / Creditview Road Extension	Rutherford Road	Langstaff Road	2-lane extension

**Table 2: Transit Projects in BAU**

Project	From	To	Improvement
Barrie 15-min GO Service (Union Station – Aurora GO)	Union Station	Aurora GO	GO Rail Expansion
Highway 27 Priority Bus (Kipling Station – Steeles Ave.)	Kipling Station	Steeles Avenue	Priority Bus / BRT-Lite Service
Highway 7 West BRT (Helen St. – Yonge St.)	Helen Street	Yonge Street	Bus Rapid Transit
Steeles Avenue BRT	Jane Street	McCowan Road	New Bus Rapid Transit
Viva Orange	Richmond Hill Centre	Martin Grove Road	Frequency increase (15- to 10-minute headway)
Yonge BRT (North) (Mulock Dr. – Davis Dr.)	Mulock Drive	Davis Drive	New Bus Rapid Transit
Yonge BRT (South) (Highway 7 – 19th Ave.)	Highway 7	19th Avenue	New Bus Rapid Transit
YRT Highway 7	Jane Street	Highway 27	Frequency increase (16- to 15-minute headway)

## New Roads Alternative

Additional projects were added to address identified road gaps. **Table 3** shows the road projects included in the New Roads alternative. Note that projects included in the BAU network are maintained in all alternatives, and projects listed in the following table are additive to the previous lists.

**Table 3: Road Projects in New Roads Alternative**

Project	From	To	Improvement
Ashberry Blvd/Canada's Wonderland Midblock Connector - technically justified but not implemented per council resolution	Weston Road	Jane Street	New road
Aviva Park Drive Extension / Connection to Galcat Drive	Weston Road	Pine Valley Drive	2-lane extension
Colossus Drive (Highway 400 Midblock Crossing)	Commerce Street	Famous Avenue	2-lane extension

Project	From	To	Improvement
King-Vaughan	Weston Road	Bathurst Street	4-lane widening
Kipling Avenue/Langstaff Road	Woodbridge	Highway 27	4-lane widening
Lebovic Campus Drive	Dufferin Street	Thomas Cook Avenue	2-lane extension
Pine Valley Drive	Langstaff Road	Rutherford Road	2-lane extension
Scholes Road	Steeles Avenue	Aviva Park Drive	2-lane extension
Teston Road	Keele Street	Dufferin Street	4-lane extension
Weston Road	Teston Road	King-Vaughan Road	4-lane widening

## Green Alternative

For the Green alternative, transit and targeted active transportation uplift in specific zones were used to address identified gaps. Similar to the New Roads alternative, projects included in BAU are also included in the Green alternative. Projects listed in subsequent tables in this section are in addition to BAU projects.

Notably, a single road project is included, a road extension of Grand Trunk Avenue from Rutherford Road to Major Mackenzie Drive, which represents both a missing road link and active transportation link, and was thereby included in this alternative. The transit projects included in this alternative are presented in **Table 4**.

**Table 4: Transit Projects in Green Alternative**

Project	From	To	Improvement
Brampton Transit Castlemore route extension (via Rutherford Road) to Vaughan Mills Terminal	Brampton Civic Hospital	Vaughan Mills Terminal	Frequency increase and service extension (30- to 10-minute headway)
Brampton Transit Mayfield route extension to Cortellucci Vaughan Hospital (via Major Mackenzie Drive)	The Gore Road and Queen Street	Cortellucci Vaughan Hospital	New service extension to Cortellucci Vaughan Hospital (15-minute headway)
Brampton Transit Sandalwood/Cottrelle route extension to Highway 7 (via Langstaff/Kipling)	Mount Pleasant Village	Highway 7	New service extension to Highway 7 (15-minute headway)
Highway 7 West Bus Rapid Transit	Highway 50	Helen Street	New Bus Rapid Transit Service Extension
Jane Street BRT	Major Mackenzie Drive	Steeles Avenue	New Bus Rapid Transit
Major Mackenzie Drive BRT	Jane Street	Donald Cousens Parkway	New Bus Rapid Transit

Project	From	To	Improvement
Major Mackenzie Drive West BRT	Jane Street	Highway 427	New Bus Rapid Transit
New YRT route (Highway 27, from King Road to Highway 407 subway)	King Road	Highway 407 Subway	New transit service (15-minute headway)
New YRT route (Langstaff, with detour via Kipling/Woodbridge/Islington, from Highway 50 to VMC)	Highway 50	Vaughan Metropolitan Centre	New proposed route in VTP (15-minute headway)
New YRT route (Teston Road/Stegman's Mill, from Islington to Kirby GO)	Islington Avenue	Kirby GO	New proposed route in VTP (15-minute headway)
New YRT route (West Vaughan Employment Area via Highway 27; Highway 50 (Major Mackenzie to Humber College))	Major Mackenzie Drive	Humber College	New proposed route in VTP (15-minute headway)
New YRT route (West Vaughan Employment Area via Highway 27; Zenway/West Vaughan collector (Highway 407 subway to Rutherford))	Highway 407 TTC Station	Rutherford Road	New proposed route in VTP (15-minute headway)
Steeles Avenue West Rapid Transit	Jane Street	Highway 27	New Bus Rapid Transit
YRT Dufferin extension to Kirby GO and headway improvements	Sheppard West TTC Station	Kirby GO	New transit service (10-minute headway)
YRT Islington extension (Napa Valley to Highway 27) and headway improvements	Napa Valley Avenue	Highway 27	Frequency increase on extended portion (45- to 15-minute headway)
YRT Keele extension to Kirby GO	Pioneer Village TTC Station	Kirby GO	New service extension to Kirby GO (15-minute headway)
YRT Major Mackenzie extension (Pine Valley Drive to Highway 50)	Pine Valley Drive	Highway 50	New service extension to Highway 50 (15-minute headway)
YRT Pine Valley branch addition (Pine Valley/Langstaff/Islington/Rutherford/Pine Valley, from Steeles Avenue to Teston Road)	Steeles Avenue	Teston Road	New proposed route in VTP (15-minute headway)
YRT Rutherford extension to Highway 50 and headway improvements	Jane Street	Highway 50	Frequency increase (10-minute headway)

Additionally, prioritized zones were identified as high potential for active transportation uplift in this alternative. These are presented in **Table 5**, and shown geographically in **Figure 1**.

**Table 5: Zones identified for Active Transportation Uplift**

Traffic Analysis Zones			
2072	2115	2316	2134
2135	2123	2180	2309

Traffic Analysis Zones			
2107	2122	2195	2308
2129	2120	2116	2305
2099	2121	2119	2303
2110	2132	2312	2307
2098	2108	2314	
2054	2306	2321	
2128	2292	2317	
2055	2295	2315	
2126	2294	2318	

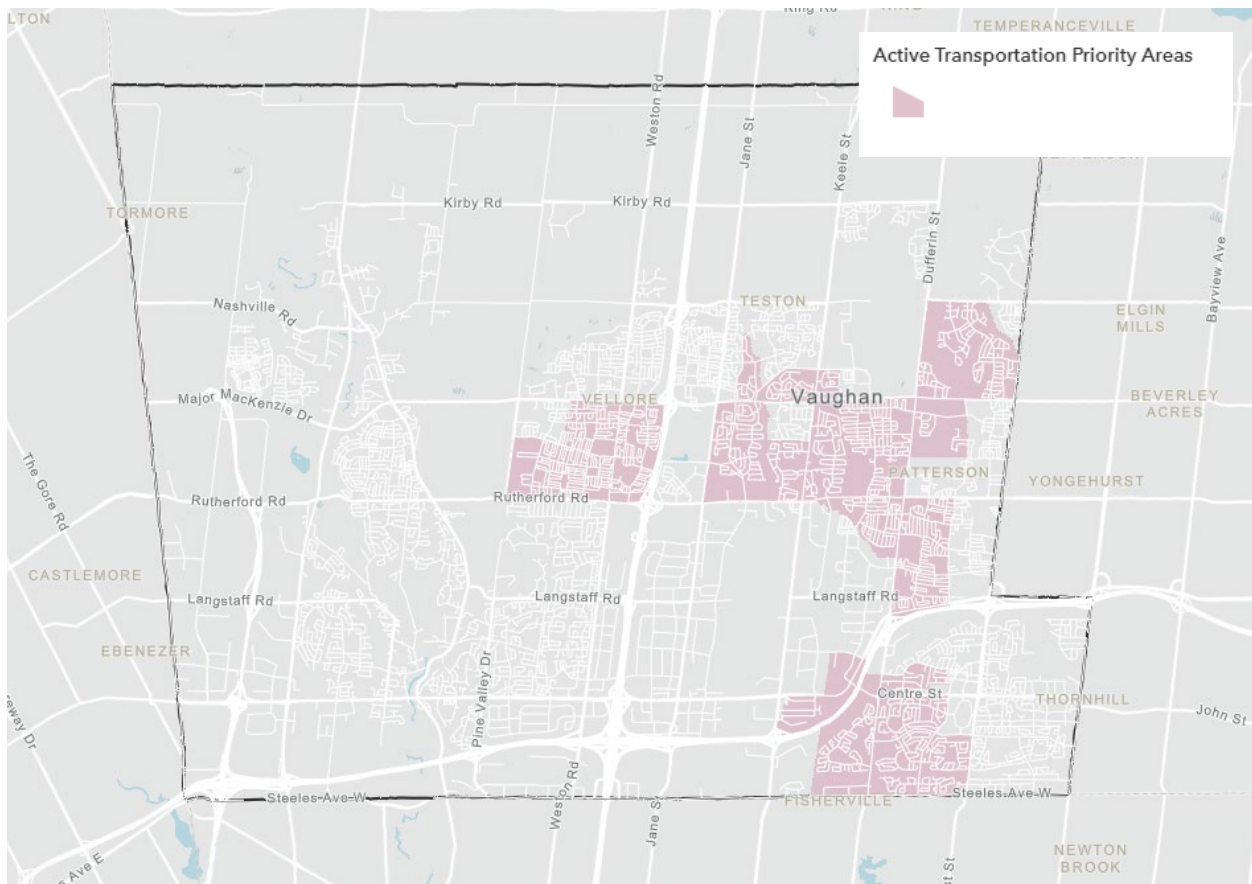


Figure 1: Map of Zones Identified for Active Transportation Uplift

## Multi-Modal Alternative

Similar to the previous two alternatives, the Multi-Modal alternative includes the projects listed for BAU, and additional road, transit, and active transportation improvements. Note that zones recommended for active transportation uplift are identical to those in the Green alternative,

which are presented in **Table 5**, and shown geographically in **Figure 1**. Road projects in the Multi-Modal alternative are listed below, in **Table 6**.

**Table 6: Road Projects in Multi-Modal Alternative**

Project	From	To	Improvement
Aviva Park Drive Extension / Connection to Galcat Drive	Weston Road	Pine Valley Drive	2-lane extension
Colossus Drive (Highway 400 Midblock Crossing)	Commerce Street	Famous Avenue	2-lane extension
Scholes Road	Steeles Avenue	Aviva Park Drive	2-lane extension
Teston Road	Keele Street	Dufferin Street	4-lane extension
Grand Trunk Avenue	Rutherford Road	Major Mackenzie Drive	2-lane extension

Transit projects in the Multi-Modal alternative are listed on the following page, in **Table 7**.

**Table 7: Transit Projects in Multi-Modal Alternative**

Project	From	To	Improvement
Brampton Transit Castlemore route extension (via Rutherford Road) to Vaughan Mills Terminal	Brampton Civic Hospital	Vaughan Mills Terminal	Frequency increase and service extension (30- to 10-minute headway)
Brampton Transit Mayfield route extension to Cortellucci Vaughan Hospital (via Major Mackenzie Drive)	The Gore Road and Queen Street	Cortellucci Vaughan Hospital	New service extension to Cortellucci Vaughan Hospital (15-minute headway)
Brampton Transit Sandalwood/Cottrelle route extension to Highway 7 (via Langstaff/Kipling)	Mount Pleasant Village	Highway 7	New service extension to Highway 7 (15-minute headway)
Highway 7 West Bus Rapid Transit	Highway 50	Helen Street	New Bus Rapid Transit Service Extension
Jane Street BRT	Major Mackenzie Drive	Steeles Avenue	New Bus Rapid Transit
Major Mackenzie Drive BRT	Jane Street	Donald Cousens Parkway	New Bus Rapid Transit
Major Mackenzie Drive West BRT	Jane Street	Highway 427	New Bus Rapid Transit
New YRT route (Highway 27, from King Road to Highway 407 subway)	King Road	Highway 407 Subway	New transit service (15-minute headway)
New YRT route (Langstaff, with detour via Kipling/Woodbridge/Islington, from Highway 50 to VMC)	Highway 50	Vaughan Metropolitan Centre	New proposed route in VTP (15-minute headway)



New YRT route (Teston Road/Stegman's Mill, from Islington to Kirby GO)	Islington Avenue	Kirby GO	New proposed route in VTP (15-minute headway)
New YRT route (West Vaughan Employment Area via Highway 27; Highway 50 (Major Mackenzie to Humber College))	Major Mackenzie Drive	Humber College	New proposed route in VTP (15-minute headway)
New YRT route (West Vaughan Employment Area via Highway 27; Zenway/West Vaughan collector (Highway 407 subway to Rutherford))	Highway 407 TTC Station	Rutherford Road	New proposed route in VTP (15-minute headway)
Steeles Avenue West Rapid Transit	Jane Street	Highway 27	New Bus Rapid Transit
YRT Dufferin extension to Kirby GO and headway improvements	Sheppard West TTC Station	Kirby GO	New transit service (10-minute headway)
YRT Islington extension (Napa Valley to Highway 27) and headway improvements	Napa Valley Avenue	Highway 27	Frequency increase on extended portion (45- to 15-minute headway)
YRT Keele extension to Kirby GO	Pioneer Village TTC Station	Kirby GO	New service extension to Kirby GO (15-minute headway)
YRT Major Mackenzie extension (Pine Valley Drive to Highway 50)	Pine Valley Drive	Highway 50	New service extension to Highway 50 (15-minute headway)
YRT Pine Valley branch addition (Pine Valley/Langstaff/Islington/Rutherford/Pine Valley, from Steeles Avenue to Teston Road)	Steeles Avenue	Teston Road	New proposed route in VTP (15-minute headway)
YRT Rutherford extension to Highway 50 and headway improvements	Jane Street	Highway 50	Frequency increase (10-minute headway)

Similar to the Green Alternative, prioritized zones were identified as high potential for active transportation uplift in this alternative. These are presented in the previous section in **Table 5**, and shown geographically in **Figure 1**.