

Town of Whitchurch-Stouffville Transportation Master Plan - Appendix D Recommended Improvements, Timing, and Cost Table

Version: February 24, 2017

Revised by: jch

Item#	Source for Improvement	Road	From	To	Improvement Type	Road Class / Jurisdiction	Timing	Exist. Cross-section	Future Cross-section	Length / Qty	Units	Improvement Code	Benchmark cost (\$)*	Subtotal	Engineering (10%)	Contingency (10%)	Total cost	
73	YRTMP	Vandorf Sideroad	Highway 404	Woodbine Ave	Shared Route	Town Minor Arterial	Short term			0.4	km	Shared Route	\$ 4,529	\$1,811	\$181	\$181	\$2,174	
74	YRTMP	Vandorf Sideroad	Woodbine Ave	Warden Ave	Shared Route	Town Minor Arterial	Short term			2.1	km	Shared Route	\$ 4,529	\$9,510	\$951	\$951	\$11,412	
75	YRTMP	McCowan Rd	Bloomington Rd	Vandorf Sideroad	Shared Route	Town Minor Arterial	Short term			2.1	km	Shared Route	\$ 4,529	\$9,510	\$951	\$951	\$11,412	
76	YRTMP	McCowan Rd	Vandorf Sideroad	Aurora Rd	Shared Route	Town Minor Arterial	Short term			2.1	km	Shared Route	\$ 4,529	\$9,510	\$951	\$951	\$11,412	
77	YRTMP	McCowan Rd	Aurora Rd	St. John's Sideroad	Shared Route	Town Minor Arterial	Short term			2.1	km	Shared Route	\$ 4,529	\$9,510	\$951	\$951	\$11,412	
78	YRTMP	McCowan Rd	St. John's Sideroad	Vivian Rd	Shared Route	Town Minor Arterial	Short term			2.1	km	Shared Route	\$ 4,529	\$9,510	\$951	\$951	\$11,412	
79	YRTMP	McCowan Rd	Vivian Rd	Davis Dr	Shared Route	Town Minor Arterial	Short term			2.1	km	Shared Route	\$ 4,529	\$9,510	\$951	\$951	\$11,412	
80	YRTMP	Lakeshore Rd	Highway 48	Ninth Line	Shared Route	Town Collector	Short term			2.5	km	Shared Route	\$ 4,529	\$11,321	\$1,132	\$1,132	\$13,586	
81	YRTMP	Ninth Line	Resnook Ln	Cedarvale Blvd	Shared Route	Regional Arterial	Short term			1	km	Shared Route	\$ 4,529	\$4,529	\$453	\$453	\$5,434	
82	YRTMP	Ninth Line	Aurora Rd	St. John's Sideroad	Shared Route	Town Minor Arterial	Short term			2.1	km	Shared Route	\$ 4,529	\$9,510	\$951	\$951	\$11,412	
83	YRTMP	Ninth Line	St. John's Sideroad	Vivian Rd	Shared Route	Town Minor Arterial	Short term			2.1	km	Shared Route	\$ 4,529	\$9,510	\$951	\$951	\$11,412	
84	Trails MP	Multiple Roads (Stouffville Trails Plan)			Shared Route	Town Collector	Short term			15.7	km	Shared Route	\$ 4,529	\$71,099	\$7,110	\$7,110	\$85,319	
		Off-Road Multi-Use Trails																
85	Trails MP	Off-Road Multi-Use Trails (Unbuilt - Stouffville Trails Master Plan)				Off-Road MUP		Short term			17.1	km	Off-Road MUP	\$ 140,000	\$2,394,000	\$239,400	\$239,400	\$2,872,800
		Naturalized Trails																
86	Trails MP	Off-Road trails (Unbuilt - Stouffville Trails Master Plan)				Naturalized Trail		Short term			1	km	Naturalized Trail	\$ 140,000	\$140,000	\$14,000	\$14,000	\$168,000
87	Trails MP	Off-Road trails (Unbuilt - Ballantrae Secondary Plan)				Naturalized Trail		Short term			10.1	km	Naturalized Trail	\$ 140,000	\$1,414,000	\$141,400	\$141,400	\$1,696,800
88	YRTMP	McCowan Rd	Faulkner Ave	200m south of Cherry St	Naturalized Trail		Short term			0.3	km	Naturalized Trail	\$ 140,000	\$42,000	\$4,200	\$4,200	\$50,400	
		Illumination																
89	Capital Budget	Highway 48	Ballantrae Rd	Savoia Phase 3 entrance	Streetlights	Provincial Highway	Short term			2.0	km	Illumination	\$ 328,840	\$657,680	\$65,768	\$65,768	\$789,216	
90	Capital Budget	Highway 48	Bethesda Road	Millard Street	Streetlights	Provincial Highway	Medium term			1.1	km	Illumination	\$ 328,840	\$361,724	\$36,172	\$36,172	\$434,069	
91	Capital Budget	Highway 48	Millard Street	Stouffville Rd	Streetlights	Provincial Highway	Medium term			0.6	km	Illumination	\$ 328,840	\$197,304	\$19,730	\$19,730	\$236,765	
92	Capital Budget	Ninth Line	S limit of Hamlet of Bloomington	N limit of Hamlet of Bloomington	Streetlights	Regional Arterial	Short term			0.6	km	Illumination	\$ 328,840	\$197,304	\$19,730	\$19,730	\$236,765	
93	Capital Budget	Ninth Line	S limit existing Musselman Lake	N limit existing Musselman Lake	Streetlights	Regional Arterial	Short term			1.5	km	Illumination	\$ 328,840	\$493,260	\$49,326	\$49,326	\$591,912	
94	Capital Budget	Tenth Line	Mantle Avenue	S. Townline	Streetlights	Town Minor Arterial	Long term			0.4	km	Illumination	\$ 328,840	\$131,536	\$13,154	\$13,154	\$157,843	
95	Capital Budget	Tenth Line	Main Street	Bethesda Rd N.	Streetlights	Town Major Arterial	Short term			2.0	km	Illumination	\$ 328,840	\$657,680	\$65,768	\$65,768	\$789,216	
96	Capital Budget	York-Durham Line	S. Townline	Mantle Avenue	Streetlights	Regional Arterial	Medium term			0.6	km	Illumination	\$ 328,840	\$197,304	\$19,730	\$19,730	\$236,765	
97	Capital Budget	York-Durham Line	Mantle Avenue	Hoover Park Drive	Streetlights	Regional Arterial	Medium term			0.4	km	Illumination	\$ 328,840	\$131,536	\$13,154	\$13,154	\$157,843	
98	Capital Budget	York-Durham Line	Hoover Park Drive	Main Street	Streetlights	Regional Arterial	Medium term			0.7	km	Illumination	\$ 328,840	\$230,188	\$23,019	\$23,019	\$276,226	
99	Capital Budget	York-Durham Line	Main Street	Forsyth Farm Drive	Streetlights	Regional Arterial	Medium term			1.0	km	Illumination	\$ 328,840	\$328,840	\$32,884	\$32,884	\$394,608	
100	Capital Budget	York-Durham Line	Forsyth Farm Drive	N limit of Development (Stouffville)	Streetlights	Regional Arterial	Medium term			0.3	km	Illumination	\$ 328,840	\$98,652	\$9,865	\$9,865	\$118,382	
101	Capital Budget	Aurora Road	Grayfield Drive	Ballantrae School	Streetlights	Regional Arterial	Short term			2.4	km	Illumination	\$ 328,840	\$789,216	\$78,922	\$78,922	\$947,059	
102	WS DC	Bloomington Road	W limit of Hamlet of Bloomington	E limit of Hamlet of Bloomington	Streetlights	Regional Arterial	Short term			0.6	km	Illumination	\$ 328,840	\$197,304	\$19,730	\$19,730	\$236,765	
		Sidewalks (both sides unless indicated)																
103	Capital Budget	Highway 48	Ballantrae Rd	Savoia Phase 3 entrance	1.5m sidewalks (2 sides)	Provincial Highway	Short term			2.0	km	Sidewalk-2-1.5	\$ 223,974	\$447,948	\$44,795	\$44,795	\$537,538	
104	WS DC	Highway 48	Millard Street	Stouffville Rd	1.5m sidewalk (1 side)	Provincial Highway	Medium term			0.6	km	Sidewalk-1-1.5	\$ 111,987	\$67,192	\$6,719	\$6,719	\$80,631	
105	WS DC	Highway 48	Stouffville Rd	Sam's Way	1.5m sidewalk (1 side)	Provincial Highway	Medium term			1.2	km	Sidewalk-1-1.5	\$ 111,987	\$134,384	\$13,438	\$13,438	\$161,261	
106	Capital Budget	Ninth Line	S limit of Hamlet of Bloomington	N limit of Hamlet of Bloomington	1.5m sidewalks (2 sides)	Regional Arterial	Short term			0.6	km	Sidewalk-2-1.5	\$ 223,974	\$134,384	\$13,438	\$13,438	\$161,261	
107	Capital Budget	Ninth Line	S limit existing Musselman Lake	N limit existing Musselman Lake	1.5m sidewalks (2 sides)	Regional Arterial	Short term			1.5	km	Sidewalk-2-1.5	\$ 223,974	\$335,961	\$33,596	\$33,596	\$403,153	
108	Trails MP	Ninth Line	Millard St	Bayberry St	1.8m sidewalk (1 side)	Regional Arterial	Short term			0.5	km	Sidewalk-1-1.8	\$ 132,981	\$66,490	\$6,649	\$6,649	\$79,788	
109	Trails MP	Ninth Line	Bayberry St	Bethesda Rd N.	1.8m sidewalk (1 side)	Regional Arterial	Medium term			0.9	km	Sidewalk-1-1.8	\$ 132,981	\$119,683	\$11,968	\$11,968	\$143,619	
110	Trails MP	Tenth Line	Hemlock Drive	Forsyth Farm Drive	1.8m sidewalk (1 side)	Town Major Arterial	Short term			0.4	km	Sidewalk-1-1.8	\$ 132,981	\$53,192	\$5,319	\$5,319	\$63,831	
111	Trails MP	Trails MP	Forsyth Farm Drive	Bethesda Rd N.	1.8m sidewalk (1 side)	Town Major Arterial	Medium term			1.1	km	Sidewalk-1-1.8	\$ 132,981	\$146,279	\$14,628	\$14,628	\$175,535	
112	Trails MP	York-Durham Line	S. Townline	Hoover Park Drive	1.8m sidewalk (1 side)	Regional Arterial	Medium term			1.0	km	Sidewalk-1-1.8	\$ 132,981	\$132,981	\$13,298	\$13,298	\$159,577	
113	Trails MP	York-Durham Line	Hoover Park Dr	Main Street	1.8m sidewalk (1 side)	Regional Arterial	Medium term			0.7	km	Sidewalk-1-1.8	\$ 132,981	\$93,087	\$9,309	\$9,309	\$111,704	
114	Trails MP	York-Durham Line	Main St	Forsyth Farm Drive	1.8m sidewalk (1 side)	Regional Arterial	Medium term			1.0	km	Sidewalk-1-1.8	\$ 132,981	\$132,981	\$13,298	\$13,298	\$159,577	
115	Trails MP	York-Durham Line	Forsyth Farm Drive	Bethesda Rd N.	1.8m sidewalk (1 side)	Regional Arterial	Medium term			1.1	km	Sidewalk-1-1.8	\$ 132,981	\$146,279	\$14,628	\$14,628	\$175,535	
116	Capital Budget	Aurora Road	Grayfield Drive	Ballantrae School	1.5m sidewalks (2 sides)	Regional Arterial	Short term			2.4	km	Sidewalk-2-1.5	\$ 223,974	\$537,538	\$53,754	\$53,754	\$645,046	
117	Capital Budget	Bloomington Road	W limit of Hamlet of Bloomington	E limit of Hamlet of Bloomington	1.5m sidewalks (2 sides)	Regional Arterial	Short term			0.6	km	Sidewalk-2-1.5	\$ 223,974	\$134,384	\$13,438	\$13,438	\$161,261	
118	WS DC	Downtown Intensification Area	various locations		1.5m sidewalks (2 sides)	Town Collectors / Local Roads	Medium term			0.4	km	Sidewalk-2-1.5	\$ 223,974	\$89,590	\$8,959	\$8,959	\$107,508	
		Creek Crossings- Structures																
119	Capital Budget	Crossing (RB04)	Baker Hill Drive at Little Rouge Creek (West)		Structures	Town Collector	Short term			740	m2	Structures	\$ 3,000	\$2,220,000	\$222,000	\$222,000	\$2,664,000	
120	Capital Budget	Crossing (RB05)	Forsyth Farm Road at Reesor Creek		Structures	Town Collector	Short term			740	m2	Structures	\$ 3,000	\$2,220,000	\$222,000	\$222,000	\$2,664,000	
121	Capital Budget	Crossing (RB06)	Ringwood Drive Extension at Little Rouge Creek, East Tributary		Structures	Town Collector	Medium term			740	m2	Structures	\$ 3,000	\$2,220,000	\$222,000	\$222,000	\$2,664,000	
122	WSTMP	Crossing	Ringwood Drive Extension at Little Rouge Creek, West Tributary		Structures	Town Collector	Medium term			1000	m2	Structures	\$ 3,000	\$3,000,000	\$300,000	\$300,000	\$3,600,000	
122	WS DC	Crossing (RB10)	Baker Hill Drive at Little Rouge Creek (East)		Structures	Town Collector	Short term			740	m2	Structures	\$ 3,000	\$2,220,000	\$222,000	\$222,000	\$2,664,000	
		Signals																
123	Capital Budget	Highway 48 / Bethesda Road North Leg			Signals	Provincial Highway	Medium term			1	LS	Traffic Signals	\$ 179,027	\$179,027	\$17,903	\$17,903	\$214,832	
124	Capital Budget	(TS16) Sandiford Drive / Hoover Park Drive			Signals	Town Collector	Short term			1	LS	Traffic Signals	\$ 179,027	\$179,027	\$17,903	\$17,903	\$214,832	
125	WS DC	Hoover Park/ Mostar			Signals	Town Collector	Medium term			1	LS	Traffic Signals	\$ 179,027	\$179,027	\$17,903	\$17,903	\$214,832	
126	Capital Budget	(TS27) Tenth Line North / Forsyth Farm Rd			Signals	Town Major Arterial	Short term			1	LS	Traffic Signals	\$ 179,027	\$179,027	\$17,903	\$17,903	\$214,832	
127	Capital Budget	(TS28) Regional Road 30 / Hoover Park Drive			Signals	Regional Arterial	Medium term			1	LS	Traffic Signals	\$ 179,027	\$179,027	\$17,903	\$17,903	\$214,832	
		Roundabouts																
128	WS DC	Baker Hill Blvd / Ninth Line			Roundabout	Town Collector	Short term			1	LS	Roundabout	\$ 424,784	\$424,784	\$42,478	\$42,478	\$509,740	
129	WS DC	Tenth Line / Street G			Roundabout	Town Major Arterial	Medium term			1	LS	Roundabout	\$ 424,784	\$424,784	\$42,478	\$42,478	\$509,740	
130	WS DC	Tenth Line/ Byers Pond Way			Roundabout	Town Minor Arterial	Short term			1	LS	Roundabout	\$ 424,784	\$424,784	\$42,478	\$42,478	\$509,740	
		Traffic Calming																
131	WS DC	Hoover Park Drive (mini round-abouts)			Traffic calming	Town Collector	Short term			4	each	Roundabout	\$ 100,000	\$400,000	\$40,000	\$40,000	\$480,000	

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Revised by: jchai

Item#	Source for Improvement	Road	From	To	Improvement Type	Road Class / Jurisdiction	Timing	Exist. Cross-section	Future Cross-section	Length / Qty	Units	Improvement Code	Benchmark cost (\$)*	Subtotal	Engineering (10%)	Contingency (10%)	Total cost
132	WS DC	Millard Street (mini roundabouts)			Traffic calming	Town Collector	Short term			4	each	Roundabout	\$ 100,000	\$400,000	\$40,000	\$40,000	\$480,000
		Intersection Improvements															
133	WSTMP	Lakeshore Rd @ Highway 48			Safety Improvements / Striping	Provincial Highway	Short term					Safety Improvements / Striping		\$125,000	\$12,500	\$12,500	\$150,000
		Traffic Management Systems			TMS												
134	Capital Budget	Traffic systems - arterial roads			TMS	Town Major Arterial	Short term							\$145,167	\$14,517	\$14,517	\$174,200
135	Capital Budget	Traffic Timing System - Other Roads			TMS	Town Major Arterial	Short term							\$121,917	\$12,192	\$12,192	\$146,300
		Studies															
136	WS DC	Growth management studies (DC)			Studies	Town-wide	Short term			4	each	Studies	\$ 70,000	\$280,000		\$28,000	\$308,000
137	WSTMP	Complete Street Design Guidelines			Studies	Town-wide	Short term			1	each	Studies	\$ 50,000	\$50,000		\$5,000	\$55,000
138	WSTMP	Roundabout Screening Policy / Tool and Network Screening Study			Studies	Town-wide	Short term			1	each	Studies	\$ 50,000	\$50,000		\$5,000	\$55,000
139	WS DC	Growth management studies (TMP)			Studies	Town-wide	Medium term			4	each	Studies	\$ 180,000	\$720,000		\$72,000	\$792,000
140	WS DC	Traffic operations studies			Studies	Town-wide	2017- 2031 biannual			8	each	Studies	\$ 60,000	\$480,000		\$48,000	\$528,000
141	WS DC	Bethesda Sdrd Environmental Assessment			Studies	Town Minor Arterial	Short term			1	each	Studies	\$ 200,000	\$200,000		\$20,000	\$220,000
142	WS DC	Lakeshore Road Environmental Assessment			Studies	Town Minor Arterial	Medium term			1	each	Studies	\$ 150,000	\$150,000		\$15,000	\$165,000
143	WS DC	Ringwood Drive Extension Environmental Assessment			Studies	Town Minor Arterial	Short term			1	each	Studies	\$ 250,000	\$250,000		\$25,000	\$275,000
144	WS DC	10th Line Improvements and Jog Elimination Environmental Assessment			Studies	Town Minor Arterial	Medium term			1	each	Studies	\$ 200,000	\$200,000		\$20,000	\$220,000
142	WS DC	Project management and administration			Admin	Town	2017-2031			15	years		\$ 136,000	\$2,040,000			\$2,040,000
		TOTAL												\$ 47,967,733	\$ 4,354,773	\$ 4,592,773	\$ 56,915,280

*NOTE: All costs are approximate and based on unit cost assumptions. Detailed cost estimates are subject to further study. A list of benchmark cost estimates is provided in Appendix D-1.