

Appendix F

Road Network Cost Tables

Clarington TMP
Implementation Strategy

Capital Project Types & Unit Costs (inflated to 2014)

Source: Development Charges Background Study, APPENDIX, Hemson Consulting Ltd., June 2010

Inflation Rate (2010 to 2014): 7.93% (according to Bank of Canada)

Source: <http://www.bankofcanada.ca/rates/related/inflation-calculator/>

Project Type	Project Description	Unit Costs / m								
		Road Construction	Storm Drainage	Sidewalk Construction	Streetlight Construction	Utility Works	Streetscape Work	Signals / Intersections	Structure Works	Signals / Int Price
Road Works										
1.1	Semi Urban to Urban Collector	\$1,348.61	\$666.99	\$225.14	\$65.66	\$120.02	\$209.43	\$0.00	\$0.00	\$0.00
1.2	Rural to Urban Collector	\$2,029.90	\$698.16	\$227.55	\$65.66	\$145.01	\$64.28	\$0.00	\$0.00	\$0.00
1.3	Collector Road Widening	\$561.30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.4	Semi Urban to Urban Local Residential	\$1,370.35	\$766.93	\$267.50	\$0.00	\$51.73	\$8.54	\$0.00	\$0.00	\$0.00
1.5	Urban Local Reconstruction	\$1,295.78	\$397.98	\$262.88	\$0.00	\$56.98	\$45.83	\$0.00	\$0.00	\$0.00
1.6	Widening of Rural to Urban Collector	\$694.91	\$993.36	\$163.48	\$65.66	\$0.00	\$33.21	\$33.21	\$33.21	\$27,461.06
1.7	Rural to Half Urban Collector	\$1,197.83	\$382.09	\$113.78	\$65.66	\$145.01	\$32.14	\$0.00	\$0.00	\$0.00
1.8	New Urban Collector	\$1,723.88	\$401.74	\$259.79	\$301.73	\$16.03	\$106.88	\$0.00	\$0.00	\$0.00
1.9	Road Oversizing	\$380.95	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.99	Rural Upgrade	\$397.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.31	Road Widening - 2 to 4 Lanes*	\$4,633.43	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.32	Road Widening - 4 to 6 Lanes*	\$5,432.12	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sidewalk Works										
2.1	Fill Ditch and Pour Curb to Construct Sidewalk	\$0.00	\$0.00	\$704.84	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2.2	Pour Curb and Grade to Construct Sidewalk	\$0.00	\$0.00	\$341.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2.3	Tie Sidewalk into existing Cross Section	\$0.00	\$0.00	\$191.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2.4	Fill Ditch and Pour Curb to Construct Multi Use 3.0m Path	\$0.00	\$0.00	\$818.62	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Street Lighting works										
3.1	Lighting for Urban Arterial Road (both sides - 50 m spacing)	\$0.00	\$0.00	\$0.00	\$216.36	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
3.2	Decorative Street lighting (double hung in median - 50 m spacing)	\$0.00	\$0.00	\$0.00	\$468.66	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
3.3	Decorative Street Lighting (both side - 35 m space)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3.4	Lighting for Collector Road (single side - 50 m spacing)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3.5	Lighting for Rural Arterial Road (single side - 50 m spacing)	\$0.00	\$0.00	\$0.00	\$109.62	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
3.6	Lighting on Existing HP's for Arterial Road (one side - 70 m spacing)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3.7	Walkway Lighting (one side - 30 m spacing)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Intersection/Rail Crossing										
4.1	Intersection (at Highway Ramp)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$172,526.25	\$0.00	\$226,653.00
4.2	Intersection (Urban)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$317,448.30	\$0.00	\$317,448.30
4.3	Intersection (Rural)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$230,035.00	\$0.00	\$230,035.00
4.4	Railroad Crossing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$535,987.40	\$0.00	\$535,987.40
Bridge Structure Works										
5.1	Structure - Rail Underpass - Collector/Arterial (14 m ultimate width)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7,372,916.76	\$0.00
5.2	Structure - Rail Overpass - Collector/Arterial (14 m ultimate width)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8,634,400.00	\$0.00
5.3	Structure - Creek Crossing - Major (collector/arterial road, 3 span)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,577,952.03	\$0.00
5.4	Structure - Creek Crossing - Minor (local or rural road, single span)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$934,015.13	\$0.00
Streetscape Works										
6.11	Townline Rd to Darlington Blvd, Courtice	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$716.74	\$0.00	\$0.00	\$0.00
6.12	Darlington Blvd to Centerfield Dr, Courtice	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$860.34	\$0.00	\$0.00	\$0.00
6.13	Farewell Creek Bridge (Centerfield to Prestonvale Rd), Courtice	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,678.02	\$0.00	\$0.00	\$0.00
6.14	Prestonvale Rd to Trulls Rd, Courtice	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,021.36	\$0.00	\$0.00	\$0.00

6.15	Trulls Road to Maplefield St (MCA), Courtice	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,457.10	\$0.00	\$0.00	\$0.00
6.16	Maplefield St to Courtice Rd, Courtice	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,389.59	\$0.00	\$0.00	\$0.00
6.17	Courtice Rd to Hancock Rd, Courtice	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$902.69	\$0.00	\$0.00	\$0.00
6.20	Streetscaping Established Corridor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,743.59	\$0.00	\$0.00	\$0.00
6.30	Streetscaping in Developing Corridor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6.40	Tree Planting Both Sides in Boulevard	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$94.53	\$0.00	\$0.00	\$0.00
Culvert Works										
8.1	Extend Concrete Box Culvert	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$22,722.45	\$0.00
8.2	Replace and Extend Concrete Box Culvert	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$22,722.45	\$0.00

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Road Network Improvements Cost Estimate
Capital Project Types & Unit Costs (2010)

Source: Development Charges Background Study, APPENDIX, Hemson Consulting Ltd., June 2010

Community	Road	Location	Project Type	Project Type (code)	Length (km)	EA Process	Land Purchase	Total Gross	Notes
Bowmanville	Highway 2/King St	at Scugog St	Operational Improvement	1.31	0.02	0	0	\$46,334	Assumed cost is 1/2 the cost of an urban widening, for right turn lane
Bowmanville	Baseline Rd	Lambs Rd to Holt Rd	Upgrade Standards	1.2	5.79	0	0	\$18,704,951	
Bowmanville	Concession Rd 3	North Scugog St to Regional Rd 57	Realignment	1.8	0.05	0	0	\$140,503	Confirm cost, has already been priced
Bowmanville	Concession Rd 3	Mearns Rd to Regional Rd 57	Upgrade Standards	1.4	2.47	0	0	\$6,088,636	Confirm cost, has already been priced
Bowmanville	Concession Rd 3	at Regional Rd 57	Intersection Reconstruction	4.2	-	0	0	\$317,448	Confirm cost, has already been priced
Medium Term									
Bowmanville	Longworth Ave	Scugog St to Regional Rd 57	Widening to 4 lanes	1.31	0.85	0	0	\$3,938,420	Confirm widening unit costs
Bowmanville	Longworth Ave Extension (a)	Regional Rd 57 to Holt Rd	New Arterial 4 lanes	1.8	2.52	0	0	\$7,081,344	
Bowmanville	Longworth Ave Extension (a)	Regional Rd 57 to Holt Rd	New Arterial 4 lanes	1.8	1.69	0	0	\$4,748,997	
Bowmanville	Holt Rd*	Longworth Ave Extension (a) to Highway 2	Widening to 4 lanes	1.31	0.24	0	0	\$1,112,024	Confirm widening unit costs
Bowmanville	Holt Rd*	Highway 2 to Bloor St	Upgrade Standards	1.2	0.71	0	0	\$2,293,699	
Bowmanville	Holt Rd	Bloor St to Baseline Rd	Upgrade Standards	1.2	1.94	0	0	\$6,267,289	
Bowmanville	Holt Rd	Baseline Rd to South of Highway 401	Widening to 4 lanes	1.31	1.00	0	0	\$4,633,435	Confirm widening unit costs
Bowmanville	Maple Grove Rd**	Longworth Ave Extension (b) to Bloor St	Widening to 4 lanes	1.31	1.12	0	0	\$5,189,447	Confirm widening unit costs
Bowmanville	Bloor St**	Maple Grove Rd to Holt Rd	Upgrade Standards	1.2	0.82	0	0	\$2,649,060	
Bowmanville	Baseline Rd***	Lambs Rd to Waverly St	Widening to 4 lanes	1.31	2.90	0	0	\$13,436,961	Confirm widening unit costs
Bowmanville	Lambs Rd***	Highway 2 to Baseline Rd	Widening to 4 lanes	1.31	0.67	0	0	\$3,104,401	Confirm widening unit costs