



# Appendix B

**Draft Unit Cost Schedule**

ITEM	UNIT	UNIT PRICE	COMMENTS/ASSUMPTIONS
<b>ON ROAD ROUTES</b>			
		2006	
		DOLLARS	<i>Note: unit prices for LKM are for both sides of a road unless otherwise noted.</i>
1. Add 1.5m Paved Shoulder (both sides) over existing gravel shoulders	LKM	55,000	cycling project pays for minor adjustment to granular base and asphalt
2. Widen existing asphalt shoulder to 1.5/2.0m when road is resurfaced/rehabilitated	LKM	10,000	addition of asphalt and granular base adjustment beyond existing paved shoulder at time of road project
3. Wide Curb Lane in conjunction with urban road reconstruction project	LKM	50,000	widen urban road by 0.5m each side includes catch basin leads on both sides of roads
4. Widen Curb Lane in conjunction with existing road reconstruction	LKM	170,000	full reconstruction cost for road widening by 0.5m for both sides
5. Add Bike Lane marking	LKM	7,000	addition of bike pavement markings only (edge line and bike stencils and diamond symbols - both sides of road)
6. Add 1.5/1.8m Bike Lane with new road or when existing road is scheduled for widening	LKM	150,000	cost of additional asphalt and markings - road project pays for curbs, CB leads, road pavement structure
7. Retro-fit/widen urban road with 1.5m Bike Lanes on both sides	LKM	250,000	widen full pavement structure on both sides, pavement markings, cubs, catch basin leads, sub drain under curbs
8. On-road singed route in rural area	LKM	420	one sign each side per kilometre in rural areas
9. Replace catch basin covers with bicycle friendly model	LKM	260	price varies by municipality and supplier
10. Construct Median Refuge	each	20,000	average price for basic refuge
11. Construct Pedestrian activated traffic signal (IPS)	each	60,000	varies depending on number of signal heads required
12. Construct Concrete sidewalk	LKM	100,000	one side of street only
13. Construct pedestrian overpass of major arterial/highway	each	750,000	requirements vary widely, use price as general guideline only
14. Signed route through residential (urban) area (no repainting required)	LKM	1,650	average 5 signs/km/direction of travel (signs = \$165.00 each including labour and materials)
15. Repaint/Restripe urban roadway including signage	LKM	4,000	includes painting and signing at intersections (every 100m on average)
<b>TRANSITION AREAS (ON-ROAD TO OFF-ROAD)</b>			
1. Trail/Road transition	each	2,500	typically includes 3 bollards, warning signs, curb cuts and minimal restoration (3.0m trail)
2. Trail/Road transition at existing signalized intersection	each	3,000	(at intersection with pedestrian crosswalk) typically includes 6 bollards, warning signs and minimal restoration
3. At grade mid-block crossing	each	5,000	typically includes pavement markings, 6 bollards, warning signs, curb cuts and minimal restoration
4. At grade railway crossing	each	64,000	flashing lights, motion sensing switch (C.N. estimate)
5. Below grade railway crossing	each	500,000	3.0m wide, unlit culvert style approx 10 m long for single elevated railway track
6. Multi use subway under 4 lane road	each	1,200,000	guideline price for basic 3.3 m wide, lit
<b>OFF ROAD ROUTES</b>			
1. Rough Grading	LKM	12,000	includes leveling and packing after leveling (3.0m wide)
2. Construct new granular surface trail	LKM	40,000	normal site conditions (3.0m wide)
3. Construct new asphalt trail	LKM	110,000	normal site conditions (3.0m wide)
4. Upgrading gravel trail to tar and chip	LKM	12,000	includes 1 coat primer and 2 coats surface (areas requiring "trail hardening"-3.0m wide)
5. Upgrading gravel trail to asphalt	LKM	45,000	price includes some upgrades to the base (3.0m wide)
6. Construct single track trail	LKM	10,000	includes clearing and grubbing with minor regrading to eliminate high and low points (1.5m wide)
<b>OTHER ITEMS</b>			
<b>A. Signage</b>			
1. Regulatory and Caution Signage - Off-road Trail	each	75	trailside sign, 300mm x 300mm c/w metal post
2. Traffic Signs - On-road	each	200	per M.T.O. specs
3. Regulatory Signs	each	75	same as 1 above
4. Interpretive Sign	each	800	painted wood, 1m x 1.2m, sign only
5. Trailhead kiosk	each	3,000	does not include design and supply of signboards
6. Signboards for trailhead kiosk	each	2,000	
7. Directional Sign Markers	each	50	bollard/post /w 100mm x100mm marker
<b>B. Barriers and Access</b>			
1. Lockable Gate (2 per road crossing)	each	2,000	price indicated for one side of road (2 required per road crossing)
2. Berming/boulders at road crossing	each	500	price indicated for one side of road (2 required per road crossing)
3. Granular Parking Lot at staging area (15 car capacity-gravel)	each	10,000	
4. Metal offset gates	each	1,200	provide 4 (\$4,800.00) per crossing to create maze-type barrier
<b>C. Accessories</b>			
1. Self weathering steel truss pedestrian bridge	LM	2,800	3.5 m wide
2. Self weathering steel truss pedestrian bridge	LM	1,800	1.8m wide
3. Metal stairs with hand railing and gutter to roll bicycle	vertical M	3,000	1.8m wide, galvanized steel stairs
4. Bicycle Rack	each	70	post and ring style stand
5. Bicycle Rack	each	500	holds 6 bicycles, price varies depending on manufacturer
6. Bicycle Locker	each	2,500	price varies depending on manufacturer

**NOTES:**

- Unit Prices Reflect 2006 Dollars, and do not include the cost of property acquisition, utility relocations, or major roadside drainage works unless noted
- LKM = Linear kilometres
- LM = Linear metres
- M2 = Square metres
- No sidewalk replacement is included in prices

**Town of Markham  
Cycling Master Plan**

**Unit Price Schedule**

