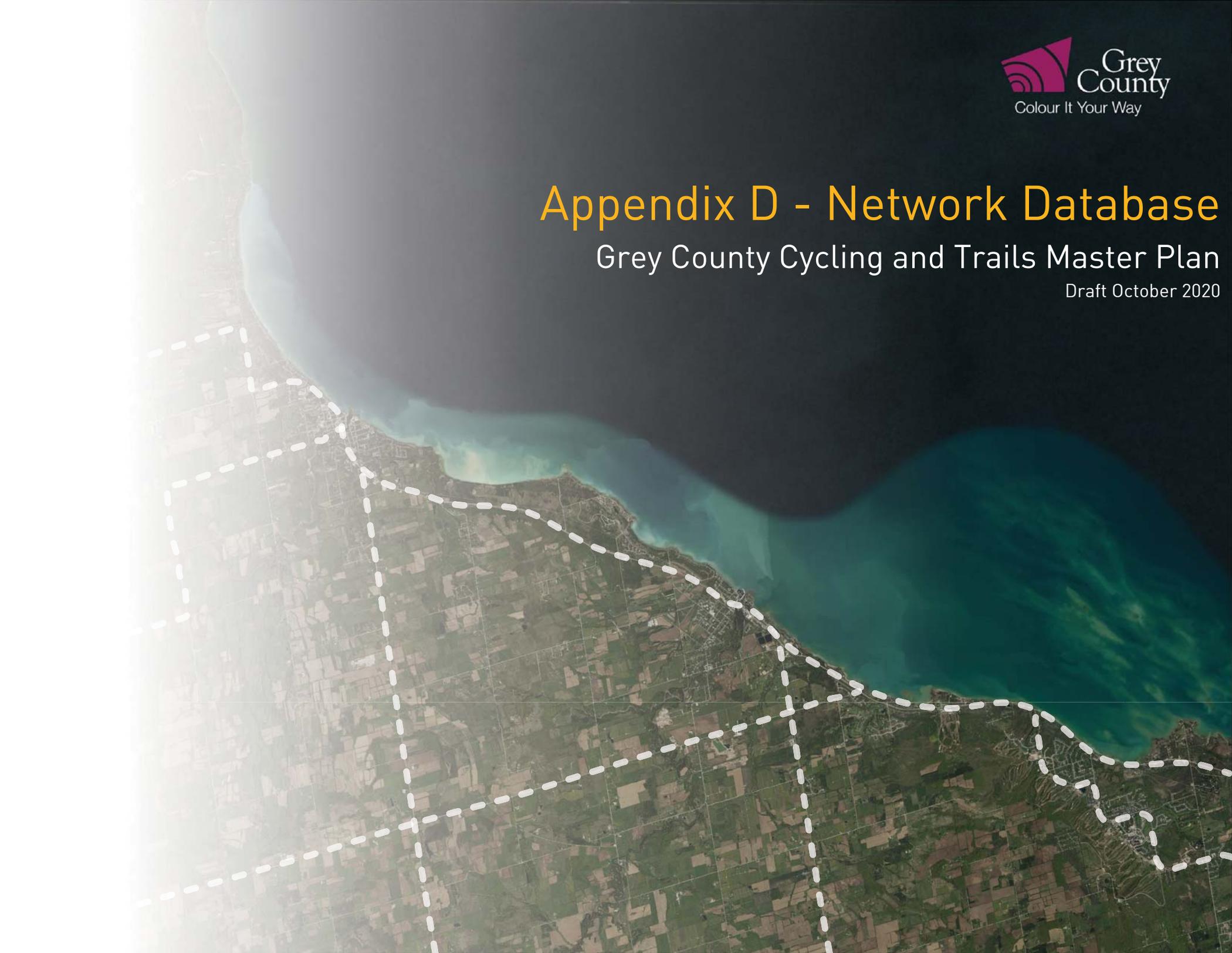


Appendix D - Network Database

Grey County Cycling and Trails Master Plan

Draft October 2020



Inside page of Appendix Cover

**Grey County Cycling and Trails Master Plan
Appendix D | Table 1 - Unit Price Schedule**

This table provides an overview of the estimated unit costs for active transportation facilities, structures and crossings and other elements of an cycling/ trails/ AT network. All unit prices exclude tax, contingency, design and approvals costs.

ITEM	DESCRIPTION	UNIT	Unit Price Range	COMMENTS/ASSUMPTIONS
1.0 GENERAL ACTIVE TRANSPORTATION FACILITIES				
Shared Lanes / Paved Shoulders				
1.0	Signed Bike Route in Urban Area	linear KM	\$1,200	Price for both sides of the road, assumes one sign a minimum of every 500 metres in the direction of travel. Price assumes that signs will be mounted on an existing post.
2.0	Signed Bike Route in Rural Area	linear KM	\$1,000	Price for both sides of the road, assumes one sign a minimum of every 2 kilometres in the direction of travel. Price assumes that signs will be mounted on a new post.
3.0	Signed Route with Edgeline	linear KM	\$3,200	Price for both sides of the road, includes signs and painted edgeline (100mm solid white line).
4.0	Signed Bike Route with Paved Shoulder in conjunction with existing road reconstruction / resurfacing	linear KM	\$100,000 - \$200,000	1.5 metre paved shoulder on both sides of the road. Assumes cycling project pays for additional granular base, asphalt and painted line. Price may vary from \$100,000 to \$200,000 depending on work needed to improve platform.
5.0	Signed Bike Route with paved shoulder where an existing partial paved shoulder exists	linear KM	\$9,000 - \$11,000	Price for both sides. Includes grinding of existing pavement, lane lines, signs. Assumes road is not to be resurfaced and space within the existing pavement can be repurposed (e.g. narrowing lanes) to achieve fully paved shoulders (1.5 metres) .
6.0	Signed Bike Route with Buffered Paved Shoulder in conjunction with existing road reconstruction / resurfacing project	linear KM	\$200,000 - \$250,000	1.5 metre paved shoulder + 0.5-1.0 metre paved buffer on both sides of the road. Assumes cycling project pays for additional granular base, asphalt, painted edge lines and signs (buffer zone framed by white edge lines). Price may vary from \$200,000 to \$250,000.
7.0	Conventional 1.5m-1.8m Bicycle Lanes by Adding Bike Lane Markings and Signs	linear KM	\$16,000	Price for both sides of the road, includes signs, stencils and edge line.
8.0	Two Way Active Transportation Multi-use path within road right-of-way	linear KM	\$275,000 - \$375,000	3.0m wide hard surface pathway (asphalt) within road right of way (no utility relocations). Price depends of scale / complexity of project and if existing sidewalk is being removed (i.e. crushing of existing sidewalk and compacting for trail base).
9.0	Off-Road (Multi-use) Recreational Trail	linear KM	\$150,000-\$175,000	3.0m wide granular surface trail hard surface (asphalt) in a Park, Open Space or EPA setting. 150mm depth of base.

Notes:

1. Unit Prices are for capital cost estimates only and include installation but exclude contingency, design and approvals costs (unless noted). Unit price reflect 2020 dollars and are based on projects in southern Ontario.
2. Estimates do not include the cost of property acquisitions, signal modifications, utility relocations, major roadside drainage works or costs associated with site-specific projects such as bridges, railway crossings, retaining walls, and
3. Assumes typical environmental conditions and topography.
4. Applicable taxes and permit fees are additional.

**Grey County Cycling and Trails Master Plan
Appendix D**

Summary of Cycling and Trails Network Costing

Table 2 - Estimated Capital Costs by Facility Type and Phase¹

Facility Types	Projects that Align with Capital Works (2020 - 2029)			Additional Projects identified as part of the Cycling and Trails Master Plan (2020 - 2029)			Long Term Projects (2030 and beyond)	
	Length (KM)	(%)	Estimated Cost	Length (KM)	(%)	Estimated Cost	Length (KM)	(%)
	Signed Routes	37.5	24.2%	\$38,819	211.7	96.4%	\$214,058	174.4
Urban Shoulders	0.0	0.0%	\$0	3.2	1.4%	\$10,140	1.3	0.4%
Paved Shoulders	117.3	75.8%	\$3,026,342	3.0	1.4%	\$128,106	116.41	32.4%
Bike Lanes	0.0	0.0%	\$0	0.8	0.4%	\$13,178	3.1	0.9%
Buffered Bike Lanes	0.0	0.0%	\$0	0.9	0.4%	\$37,667	0.0	0.0%
Buffered Paved Shoulders	0.0	0.0%	\$0	0.0	0.0%	\$0	60.5	16.9%
In-boulevard Pathway	0.0	0.0%	\$0	0.0	0.0%	\$0	1.4	0.4%
Off-road Trails	0.0	0.0%	\$0	0.0	0.0%	\$0	1.7	0.5%
Total	154.8		\$3,065,161	219.5		\$403,149	358.9	

Short-Term Total (2020-2029)		
Length (KM)	(%)	Estimated Subtotal
249.2	66.6%	\$252,877
3.2	0.8%	\$10,140
120.3	32.1%	\$3,154,448
0.8	0.2%	\$13,178
0.9	0.2%	\$37,667
0.0	0.0%	\$0
0.0	0.0%	\$0
0.0	0.0%	\$0
374.4		\$3,468,310

Table 3 - Estimated Capital Costs by Municipality²

Jurisdiction	Network Lengths (KM)	Total Network Costs	County Network Length in Municipality	County Network Cost in Municipality
Grey County	201.2	\$ 3,291,772	NA	NA
City of Owen Sound ⁴	0.0	\$ -	8.5	\$ 134,847
Municipality of West Grey	0.0	\$ -	97.7	\$ 13,192
Municipality of Meaford	26.8	\$ 28,614	52.7	\$ 605,934
Township of Georgian Bluffs	21.1	\$ 21,790	39.2	\$ 1,397,453
Municipality of Grey Highlands	61.7	\$ 61,698	119.1	\$ 549,595
Town of Hanover	1.7	\$ 2,077	1.1	\$ 37,848
Township of Southgate	2.9	\$ 2,883	69.6	\$ 8,557
Town of The Blue Mountains	22.6	\$ 23,150	29.1	\$ 90,415
Township of Chatsworth	36.0	\$ 36,043	33.1	\$ 453,930
Province of Ontario	0.3	\$ 283	NA	NA
Total	374.4	\$3,468,310		

Member Municipal Timelines	2020-2029 Length (KM)	2030 + Length (KM)
Grey County	201.2	249.1
City of Owen Sound	0.0	0.0
Municipality of West Grey	0.0	62.3
Municipality of Meaford	26.8	19.5
Township of Georgian Bluffs	21.1	1.0
Municipality of Grey Highlands	61.7	3.4
Town of Hanover	1.7	10.9
Township of Southgate	2.9	0.0
Town of Blue Mountains	22.6	11.5
Township of Chatsworth	36.0	0.0
Province of Ontario	0.3	1.1

Cycling and Trails Network Totals ³		
Length (KM)		
Grey County		374.4
Sub Total		\$3,468,310
10%	Contingency	\$346,830.97
1.76%	HST	\$61,042.25
Total Cost		\$3,876,183

* The majority of routes in Member Municipalities proposed to be implemented between 2020 and 2029 are signed routes.

1. The estimated capital cost to implement the cycling and trails network is based on unit prices (refer to the red highlighted rows in Table 1). Unit prices are for capital cost estimates only and do not include contingency, design or approvals costs. However, Construction Contingency (10%) and HST (1.76%) are included in the total network costs. Although unit prices reflect 2020 dollars, they will vary based on current market demand, inflation and pricing.

Route costing is organized by 3 recommended implementation phases:

1. Projects that align with capital works (2020 – 2029)

These are routes that are proposed to be implemented in conjunction with projects listed in Grey County's Capital Works Schedule

2. Additional Projects (2020 – 2029)

These are projects that are recommended through the Grey County Cycling and Trails Master Plan, to be implemented between 2020 – 2029 that are in addition to the projects included in the Grey County Capital Works Schedule. These projects would require the County, or member municipality to seek out additional funding sources for implementation.

3. Future Projects (2030 and beyond)

These are projects to be implemented after the 2030 horizon and that are recommended to align with future capital work schedules for the County and Member Municipalities.

2. Total network costs by municipality do not include contingency costs or tax.

3. Fields in RED are editable (global variables) and changes to these values will result in changes to the overall network costs.

4. Only routes located on County roads have been identified in the City of Owen Sound. Refer to Appendix E for cycling and trail routes located on municipal roads / lands in Owen Sound as per the City's Official Plan - Schedule D - Active Transportation and Trails Master Plan Model.