Route	Segment	Feature	Component number	Common Name	Description / Goals	Budget Item	Budget Item Listing	Length	Width	Depth	Quantity	Unit Type	$/unit	Extended Cost	Component Cost	Segment Cost	Route Cost	Notes		
Number	Upper case	lowercase	Number																	
1				**Schools to Park and Beach**	Create a safe route from schools to Park and Beach															
1	A			School Frontage on 4th St - 4th St to 8th St	School frontage pathway and 4th St/6th Ave crossing improvements															
							Comprehensive pathway 2.0 m width (some existing sidewalk segments but not aligned)					m								
						a)	site prep and removals, subgrade repair, compaction	310	3			m	$ 85.60	$ 26,536.00						
						b)	place and compact surface materials	310				m								
						c)	materials cost SGSB 75mm	310	2	0.2	124	m3	$ 45.00	$ 5,580.00						
							materials cost BASE 25mm	310	2	0.1	62	m3	$ 55.00	$ 3,410.00						
						d)	hard surface - concrete	310	2	0.1	62	m3	$ 320.00	$ 19,840.00						
							form place finish concrete	310			310	m	$ 120.00	$ 37,200.00						
							mountable curb	310			310	m	$ 30.00	$ 9,300.00						
							Subtotal								$ 101,866					
						f)	overhead (see components in standard cost table)								$ 50,933.00					
																$ 152,799		$ 492.90	/m	
1	B			8th Avenue (4th St to Broadway) Crosswalk and Pathway	Zebra crosswalk and painted Pathway to Park				lines											
			1				Crosswalk - prep and paint zebra crosswalk 8 bars		8		1	zebra	$ 750.00	$ 750.00						
							Painted Pathway M3 standard (painted) 3.0 m width, west edge of pavement in, 2 lines	500	2		1000	m	$ 2.50	$ 2,500.00						
							Symbols spacing 50 metres (bike and pedestrian)				10	symbols	$ 100.00	$ 1,000.00						
							Signage start and end , sign, post , foundation (materials cost)				2	signs	$ 295	$ 590						
							signage install				2	signs	$ 500	$ 1,000						
															$ 5,840					
							overhead (see components in standard cost table)								$ 2,920					
																$ 8,760				
2				**2nd Street Crosstown Route**	Create a quiet street east west route from Rec Centre to Hospital		Route signage										$ 161,559			
2	A		1	Rec Centre 2nd St /8th Avenue to 1st St/1st Ave	Rec Centre to 1st St/1st Ave - crosswalk and wayfinding signage															
							Signage materials cost - wayfinding posts				4	posts and signage	$ 200	$ 800						
							Signage installation				4	installation	$ 400	$ 1,600						
							Zebra crosswalk 2nd St and 6th Ave				1	prep and paint	$ 1,000	$ 1,000						
							Signage to mark start of route (specify sign number)													
															$ 3,400					
							overhead (see components in standard cost table)								$ 1,700					
																$ 5,100				
2	B		1	1st St/1st Ave past Village office to Hospital	Create a wider pathway for multi use and a safer crossing of Nelson Ave.		Widen sidewalk to M1 pathway standard, increase curb radius, create sidewalk stub on east side													
						a)	site prep and removals,cut asphalt, subgrade repair, compaction- Equipment complement #1, medium	100	2.5			m	$ 57	$ 5,707						
						b)	place and compact surface materials	100				m	$ 15	$ 1,504						
						c)	materials cost SGSB 75mm aggregate	100	2.5	0.2	50	m3	$ 45	$ 2,250						
						d)	materials cost BASE 25mm aggregate	100	2.5	0.1	25	m3	$ 55	$ 1,375						
						e)	hard surface - concrete	100	2.5	0.1	25	m3	$ 320	$ 8,000						
						f)	form place finish concrete	100			100	m	$ 120	$ 12,000						
						g)	mountable curb	100			100	m	$ 30	$ 3,000						
															$ 33,836					
							overhead (see components in standard cost table)								$ 16,918					
			2	1st St/Nelson Ave intersection north side	Crosswalk															
							Zebra crosswalk 2nd St and 6th Ave, with sidelines and green paint?				1	prep and paint	$ 1,100	$ 1,100						
							Signage materials cost - wayfinding posts				2	posts and signage	$ 200	$ 400						
							Signage installation				2	installation	$ 400	$ 800						
															$ 2,300					
							overhead (see components in standard cost table)								$ 1,150					
																$ 54,204	$ 59,304			
3				**Neighbourhood Street Connections West**	Create a quiet street route with connections to loop trails															
3	A		1		Wayfinding sign posts	a)	Signage materials cost				6	posts and signage	$ 200	$ 1,200						
						b)	Signage installation				6	installation	$ 400	$ 2,400						
															$ 3,600					
							overhead (see components in standard cost table)								$ 1,800	$ 5,400	$ 5,400			
4				**Waterfront Trail Extension to Beach**	Improve beach accessibility, use of space, and connectivity between Waterfront Path and points west with a hard surface path															
	A		1	Pathway extension - new construction			Hard surface pathway from west end of waterfront pathway to beach to west end of sidewalk Broadway													
						a)	sub grade construction, equipment and labour - Equipment complement #2 - moderate	560	3.0			m	$ 27.60	$ 15,456						
						b)	surfacing and compaction equipment and labour	560					$ 15.04	$ 8,422						
						c)	materials cost SGSB 75mm aggregate	560	2.8	0.2	313.6	m3	$ 45	$ 14,112						
						d)	materials cost BASE 25mm aggregate	560	2.8	0.1	156.8	m3	$ 55	$ 8,624						
						e)	add hard surface - asphalt	560	2.8		1,568	m2	$ 50	$ 78,400						
						f)	Symbols spacing 50 metres bike and pedestrian (need symbol)				6	symbols	$ 80	$ 480						
						g)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590						
						h)	signage install				2	signs	$ 500	$ 1,000						
															$ 127,084					
							overhead (see components in standard cost table)								$ 63,542	$ 190,627	$ 190,627			
4a				Waterfront Trail Improvements from Beach to 4th St NW	Widen trail, improve surface, realignment to improve accessibility (alternate route around major dip)															
	A						Widening, surface improvement and realignment of existing waterfront extension trail from public beach to trail head at west end of 4th St NW to decrease grades and improve accessibility													
						a)	realignment sections -sub grade construction, equipment and labour - Equipment complement #2 - moderate	450	3.0			m	$ 27.60	$ 12,420						
						b)	realignment sections -sub grade construction, equipment and labour - Equipment complement #1 - hard, includes place lock blocks	55	2.0			m	$ 85.60	$ 4,708						
						c)	surfacing and compaction equipment and labour - entire length	735					$ 15.04	$ 11,054						
						d)	materials cost SGSB 75mm aggregate - wet or sandy locations	100	2.8	0.2	56	m3	$ 45	$ 2,520						
						e)	materials cost BASE 25mm aggregate	735	2.8	0.1	205.8	m3	$ 55	$ 11,319						
						f)	materials cost Cart Path Aggregate 12mm minus	735	2.8	0.05	103	m2	$ 70	$ 7,203						
						g)	add lock blocks to abut steep sideslope full bench cut section approx 55 m long, 2 high	75				units	$ 200.00	$ 15,000						
						h)	curb or barrier for steep sideslope area				55	m	$ 125	$ 6,875						
						i)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590						
						j)	signage install				2	signs	$ 500	$ 1,000						
															$ 72,689					
							overhead (see components in standard cost table)								$ 36,345					
																$ 109,034	$ 109,034			
5				**Waterfront Trail**	Widen / replace pathway to better accommodate multi uses and maintenance vehicles															
	A		1	Pathway replacement			Hard surface pathway to repace and widen existing Waterfront Trail													
						a)	sub grade construction, equipment and labour - Equipment complement #2 - easy	770	3.0			m	$ 22.08	$ 17,002						
						b)	surfacing and compaction equipment and labour	770					$ 15.04	$ 11,581						
						c)	materials cost SGSB 75mm aggregate	770	2.8	0.2	431.2	m3	$ 45	$ 19,404						
						d)	materials cost BASE 25mm aggregate	770	2.8	0.1	215.6	m3	$ 55	$ 11,858						
						e)	add hard surface - asphalt	770	2.8		2,156	m2	$ 50	$ 107,800						
						f)	Symbols spacing 50 metres bike and pedestrian (need symbol)				7	symbols	$ 80	$ 560						
						g)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590						
						h)	signage install				2	signs	$ 500	$ 1,000						

							Subtotal							$ 169,794									
							overhead (see components in standard cost table)							$ 84,897									
																$ 254,692	$ 254,692						
6				**6th Avenue Pathways**																			
	A		1	Multi Use Path (MUP) east side of 6th Ave from 1st St to truck bypass	Create a wide hard surface pathway to replace and widen existing sidewalks with allowance for parking, landscaping and amenities, to provide main north south connectivity through Nakusp.		Create new MUP1 pathway on east side of 6th Avenue, replacing sidewalk from 1st ST to 4th St, then new construction from 4th St to Kuskanax highway bridge																
						a)	prep and removals, sub grade construction, equipment and labour - Equipment complement #1 - moderate	1100	3.0			m	$ 57.07	$ 62,773								
						b)	surfacing and compaction equipment and labour	1100					$ 15.04	$ 16,544								
						c)	materials cost SGSB 75mm aggregate	1100	2.8	0.2	616	m3	$ 45	$ 27,720								
						d)	materials cost BASE 25mm aggregate	1100	2.8	0.1	308	m3	$ 55	$ 16,940								
						e)	add hard surface - asphalt	1100	2.8		3,080	m2	$ 50	$ 154,000								
						f)	Symbols spacing 50 metres bike and pedestrian (need symbol)				20	symbols	$ 80	$ 1,600								
						g)	Signage start, mid and end , RB93 sign, post , foundation (materials cost)				4	signs	$ 295	$ 1,180								
						h)	signage install				4	signs	$ 500	$ 2,000								
						i)	sidestreet crosswalks (multi use with green background or zebra with bike sidelines?)				7	crosswalks	$ 1,100	$ 7,700								
							Subtotal								$ 290,457								
							overhead (see components in standard cost table)								$ 145,229								
																$ 435,686							
	B		1	Bike lane west side of 6th Ave	Create a south bound bike lane to provide a safer riding experience south bound. North bound bikes could elect to use MUP on east side, or ride on the east road shoulder.	a)	Bike lane standard (painted) 1.5 m width, west edge of pavement in, 1 line (freshen up fog line)	1100	1.5		1100	m	$ 3.00	$ 3,300.00								
						b)	Symbols approx spacing 75 metres (bike)				15	symbols	$ 80.00	$ 1,200.00								
						c)	Signage start and end , sign, post , foundation (materials cost)				2	signs	$ 295	$ 590								
						d)	signage install				2	signs	$ 500	$ 1,000								
							Subtotal								$ 6,090								
							overhead (see components in standard cost table)								$ 3,045								
																$ 9,135	$ 444,821						
7				**Nest Trail**																			
	A		1	M2 Multi use trail to future neighbourhood	Construct an all ages and abilities AT pathway to connect future neighbourhood with downtown core via Kuskanax West route																		
						a)	sub grade construction, equipment and labour - Equipment complement #2 - easy	600	3.0			m	$ 27.60	$ 16,560								
						b)	surfacing and compaction equipment and labour	600					$ 15.04	$ 9,024								
						c)	materials cost SGSB 75mm aggregate	600	2.8	0.2	336	m3	$ 45	$ 15,120								
						d)	materials cost BASE 25mm aggregate	600	2.8	0.1	168	m3	$ 55	$ 9,240								
						e)	materials cost Cart Path Aggregate 12mm minus	600	2.8	0.05	84	m2	$ 70	$ 5,880								
						f)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590								
						g)	signage install				2	signs	$ 500	$ 1,000								
							Subtotal								$ 57,414								
							overhead (see components in standard cost table)								$ 28,707								
																$ 86,121	$ 86,121	developer will contribute					
8				**Kuskanax West route**	Construct an all ages and abilities AT pathway to connect future neighbourhood with downtown core via Kuskanax West route - including lower bridge crossing on Kuskanax																		
	A			From the Waterfront Path extension to end of 16th Ave NW (Kuskanax Point) future neighbourhood west of Kuskanax River on former industrial lands.	AAA pathway from existing waterfront trail to trailhead west of Kuskanax River		Trail segment west across Kuskanax to end of 16th Ave																
						a)	sub grade construction, equipment and labour - Equipment complement #1 - moderate	750	3.0			m	$ 42.80	$ 32,100								
						b)	surfacing and compaction equipment and labour	750					$ 15.04	$ 11,280								
						c)	materials cost SGSB 75mm aggregate	750	2.8	0.2	420	m3	$ 45	$ 18,900								
						d)	materials cost BASE 25mm aggregate	750	2.8	0.1	210	m3	$ 55	$ 11,550								
						e)	materials cost Cart Path Aggregate 12mm minus	750	2.8	0.05	105	m2	$ 70	$ 7,350								
						f)	boardwalk sections 2.0 m width, avg 1.0 m height	100	2.0		100	m	$ 500	$ 50,000				estimated length needed				
						g)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590								
						h)	signage install				2	signs	$ 500	$ 1,000								
						i)	Pedestrian suspension bridge	80	2.0		1	bridge	$ 1,000,000	$ 1,000,000				Needs to be sent out for costing - like zuckerberg bridge but wider 1.8 to 2.0 m tread.				
							Subtotal								$ 1,132,770								
							overhead (see components in standard cost table)								$ 566,385			developer would contribute				
																$ 1,699,155							
	B			West Kuskanax River loop connection	AAA pathway up west edge of river from bridge to bridge																		
						a)	sub grade construction, equipment and labour - Equipment complement #1 - moderate	675	3.0			m	$ 57.07	$ 38,520				could be buit in two phases, initially W then M2?				
						b)	surfacing and compaction equipment and labour	675					$ 15.04	$ 10,152								
						c)	materials cost SGSB 75mm aggregate	675	2.8	0.2	378	m3	$ 45	$ 17,010								
						d)	materials cost BASE 25mm aggregate	675	2.8	0.1	189	m3	$ 55	$ 10,395								
						e)	materials cost Cart Path Aggregate 12mm minus	675	2.8	0.05	95	m2	$ 70	$ 6,615								
						f)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590								
						g)	signage install				2	signs	$ 500	$ 1,000								
							Subtotal								$ 84,282								
							overhead (see components in standard cost table)								$ 42,141								
																$ 126,423	$ 1,825,578						
9				**Nature loop south**																			
	A			From Marina to south municipal lands (island then mainland)	Seasonal nature walk or paddle to underused municipal lands south of Nakusp																		
						a)	sub grade and picnic area construction, equipment and labour - Equipment complement #2 - easy	1000	1.5			m	$ 22.08	$ 22,080				assume seasonal use because of water levels, part on old road grade				
						b)	surfacing and compaction equipment and labour	0					$ 15.04	$ -								
						c)	materials cost SGSB 75mm aggregate	0	2.8	0.2	0	m3	$ 45	$ -								
						d)	materials cost BASE 25mm aggregate	0	2.8	0.1	0	m3	$ 55	$ -								
						e)	materials cost Cart Path Aggregate 12mm minus	0	2.8	0.05	-	m2	$ 70	$ -								
						f)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590								
						g)	signage install				2	signs	$ 500	$ 1,000								
						h)	wayfinding markers with blazers on galvanized metal posts, dig in				20		$ 75	$ 1,500								
							Subtotal								$ 23,670								
							overhead (see components in standard cost table)								$ 11,835								
																$ 35,505	$ 35,505						
10				**Upper Benches Connection**																			
	A			From 4th St/ 3rd Ave northwards to rail trail	Some existing roadway, then an unmaintained trail north to railway grade (on historic roadway)	a)	assume minimal cost on exisitng street to trailhead																
						b)	sub grade construction, equipment and labour - clear vegetation, remove excess materials Equipment Complement #1-moderate	220	5.0			m	$ 42.80	$ 9,416								
						c)	surfacing and compaction equipment and labour	220					$ 15.04	$ 3,309								
						d)	materials cost SGSB 75mm aggregate	220	2.8	0.2	123.2	m3	$ 45	$ 5,544								
						e)	materials cost BASE 25mm aggregate	220	2.8	0.1	61.6	m3	$ 55	$ 3,388								
						f)	materials cost Cart Path Aggregate 12mm minus	220	2.8	0.05	31	m2	$ 70	$ 2,156								
						g)	surface drainage structures				4	units	$ 300	$ 1,200								
						h)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590								
						i)	signage install				2	signs	$ 500	$ 1,000								
						j)	barrier supply and install - type TBD				1	gate/barrier	$ 3,000	$ 3,000								
							Subtotal								$ 29,603								
							overhead (see components in standard cost table)								$ 14,801								
																$ 44,404							
	B			From rail trail north to Upper benches via highway underpass	Highway underpass then realign an existing trail to reduce grade , connect to abandoned road grade on upper bench.	a)	Concrete highway box culvert and joint mat'l for underpass supply and freight - 2.5 m headroom required	15				m	4000	60000								

						b)	Prep, install, repair highway, repave (110m2)															
						1	Excavation - 2 excavators for 1 week				100	hrs	250	25000								
						2	haul away excavated material and stockpile or dispose, tandem dump trucks				20	hrs	150	3000								
						3	hoe pack				40	hrs	60	2400								
						4	labourers and compactor				80	hrs	120	9600								
						5	geo cloth				1	roll	1000	1000								
						6	bedding and cover material, sub base and base materials, delivered cost				250	m3	50	12500								
						7	repave				110	m2	50	5500								
						8	additional traffic control				5	days	1600	8000								
						9	paint				1	fix up lines	2000	2000								
						10	solar lighting for interior TBD				1	system	5000	5000								
							Subtotal								134000							
						c)	sub grade construction, equipment and labour - improve grade north of highway including 50m full bench section, sandy material - use Equipment Complement #2 - moderate	420	5.0			m	$ 27.60	$ 11,592								
							add lock blocks to abut steep sideslope full bench cut section approx 50 m long, 2 high	70				units	$ 200.00	$ 14,000								
						d)	surfacing and compaction equipment and labour	420					$ 15.04	$ 6,317								
						e)	materials cost SGSB 75mm aggregate	420	2.8	0.2	235.2	m3	$ 45	$ 10,584								
						f)	materials cost BASE 25mm aggregate	420	2.8	0.1	117.6	m3	$ 55	$ 6,468								
						g)	materials cost Cart Path Aggregate 12mm minus	420	2.8	0.05	59	m2	$ 70	$ 4,116								
						h)	surface drainage structures				4	units	$ 300	$ 1,200								
						i)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590								
						j)	signage install				2	signs	$ 500	$ 1,000								
						k)	barrier supply and install - type TBD				1	gate/barrier	$ 3,000	$ 3,000								
							Subtotal								$ 58,867							
							overhead (see components in standard cost table)								$ 96,433							
																			$ 289,300	$ 333,704		
11				**Neighbourhood Street Connections East**	Wayfinding sign posts and improved access to rail trail																	
	A					a)	Wayfinding post sand signage materials cost				10	posts and signage	$ 200	$ 2,000								
						b)	Wayfinding post installation				10	installation	$ 400	$ 4,000								
						c)	sub grade construction, equipment and labour - Equipment complement #2 - easy	70	3.0			m	$ 22.08	$ 1,546								
						d)	surfacing and compaction equipment and labour	70					$ 15.04	$ 1,053								
						e)	materials cost SGSB 75mm aggregate	70	2.8	0.2	39.2	m3	$ 45	$ 1,764								
						f)	materials cost BASE 25mm aggregate	70	2.8	0.1	19.6	m3	$ 55	$ 1,078								
						g)	materials cost Cart Path Aggregate 12mm minus	70	2.8	0.05	10	m2	$ 70	$ 686								
						h)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590								
						i)	signage install				2	signs	$ 500	$ 1,000								
						j)	barrier supply and install - type TBD for trailhead to rail trail				1	gate/barrier	$ 3,000	$ 3,000								
						k)	add zebra crosswalk 1st St 1st Ave				1	crosswalk	$ 1,100	$ 1,100								
							Subtotal								$ 17,816							
							overhead (see components in standard cost table)								$ 8,908							
																			$ 26,725	$ 26,725		
12				**Hospital / Rail Trail Connection**	Semi accessible connection from rail trail to hospital and downtown																	
	A				Improve rail trail junction, improve surfacing and install surface water drainage structures	a)	sub grade construction, equipment and labour - improve subgrade, fill below rail trail junction to improve grade, fill volume approx 100 m3 - use Equipment complement #2 - easy	100	3.0			m	$ 22.08	$ 2,208								
						b)	surfacing and compaction equipment and labour	325					$ 15.04	$ 4,888								
						c)	materials cost SGSB 75mm aggregate, add 100m3 for fill above	325	2.8	0.2	282	m3	$ 45	$ 12,690								
						d)	materials cost BASE 25mm aggregate	325	2.8	0.1	91	m3	$ 55	$ 5,005								
						e)	materials cost Cart Path Aggregate 12mm minus	325	2.8	0.05	46	m2	$ 70	$ 3,185								
						f)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590								
						g)	signage install				2	signs	$ 500	$ 1,000								
						h)	surface drainage structures for steeper grades to limit erosion				4	units	$ 300	$ 1,200								
						i)	bench / rest area				1	bench	$ 2,500	$ 2,500								
						j)	barrier supply and install - type TBD				2	gate/barrier	$ 3,000	$ 6,000								
							Subtotal								$ 39,266							
							overhead (see components in standard cost table)								$ 19,633							
																			$ 58,899	$ 58,899		
13				**Rail trail**																		
	A			Truck Bypass trail paralleling Hwy 6 south of Nelson Ave	North of Nelson Ave, paralleling below Hwy 6 (truck bypass route) upgrade to M2 standard by horizontal and vertical alignment to improve grades, widen trail and improve surface condition.		Trail needs subgrade and surfacing improvements. Horizontal and vertical alignments would markedly improve grades and enable use by most potential AT user groups. Issues with snow plowing onto trail from highway need to be resolved to enable year round use. Lift grade over Powell Creek by additional row of lock blocks. One additional section has constrained width and requires lock block abutments (in cut and fill)													
						a)	sub grade construction, equipment and labour - equipment compliment #2- moderate	1360	2.8			m	$ 27.60	$ 37,536								
						b)	sub grade construction, equipment and labour - equipment compliment #2- hard, includes place lock block abutments	190	2.0				$ 55.20	$ 10,488								
						c)	Additional fill volume to import				1500	m3	$ 15.00	$ 22,500								
						d)	Lock blocks for narrow trail prism avg 1 in cut, 1 in fill (over Powell creek and 2 other steep narrow sections)	190			320	blocks	$ 200.00	$ 64,000								
						e)	surfacing and compaction equipment and labour	1360					$ 15.04	$ 20,454								
						f)	materials cost SGSB 75mm aggregate	1360	2.8	0.2	761.6	m3	$ 45	$ 34,272								
						g)	materials cost BASE 25mm aggregate	1360	2.8	0.1	380.8	m3	$ 55	$ 20,944								
						h)	materials cost Cart Path Aggregate 12mm minus	1360	2.8	0.05	190	m2	$ 70	$ 13,328								
						i)	surface drainage structures as required on steeper grades to limit erosion				6	units	$ 300	$ 1,800								
						j)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590								
						k)	signage install				2	signs	$ 500	$ 1,000								
						l)	barrier supply and install - type TBD				2	gate/barrier	$ 3,000	$ 6,000								
							Subtotal								$ 232,912							
							overhead (see components in standard cost table)								$ 116,456							
																			$ 349,369			
	B			Rail trail from Nelson Ave. to golf course	South of Nelson Ave, on historic rail grade to golf course - bring to M2 standard by periodic subgrade repair, resurfacing and compaction. Consider aggregate additive to improve final surface and improve durability.		Aggregate topped multi use 2.5 to 3.0 m width, accessible grades. Motorized traffic along with AT users. Consider use of an aggregate binder to make a more durable but porous trail surface.													
						a)	sub grade repairs, equipment and labour - equipment compliment #2- easy	500	2.8			m	$ 22.08	$ 11,040								
						b)	Lock blocks or No-post for guarding trail edges over repaired washout culvert and adjacent culvert	60			40	blocks	$ 200.00	$ 8,000								
						c)	surfacing and compaction equipment and labour	3700					$ 15.04	$ 55,648								
						d)	materials cost SGSB 75mm aggregate	500	2.8	0.2	280	m3	$ 45	$ 12,600								only needed in repair areas?
						e)	materials cost BASE 25mm aggregate	3700	2.8	0.1	1036	m3	$ 55	$ 56,980								
						f)	materials cost Cart Path Aggregate 12mm minus	3700	2.8	0.05	518	m2	$ 70	$ 36,260								
						g)	aggregate binder or gel product - investigate costs and try as test case															research type and cost
						h)	surface drainage structures as required on steeper grades to limit erosion				10	units	$ 300	$ 3,000								
						i)	Signage start and end , RB93 sign, post , foundation (materials cost)				2	signs	$ 295	$ 590								
						j)	signage install				2	signs	$ 500	$ 1,000								
							Subtotal								$ 185,118							
							overhead (see components in standard cost table)								$ 92,559							
																			$ 277,677	$ 627,046		
14				**Zachs / Rail Trail Connection**	Tidy up and add surfacing to a short cut trail to connect with the rail trail																	
	A						Semi accessible connection from rail trail to Hwy 6, to separate AT from vehicle traffic, improving subgrade and surfacing would help trafficability															

						a)	sub grade repairs, equipment and labour - equipment compliment #2- easy	95	2.8			m	$ 22.08	$ 2,098										
						e)	surfacing and compaction equipment and labour	95					$ 15.04	$ 1,429										
						f)	materials cost SGSB 75mm aggregate	95	2.8	0.2	53.2	m3	$ 45	$ 2,394										
						g)	materials cost BASE 25mm aggregate	95	2.8	0.1	26.6	m3	$ 55	$ 1,463										
						h)	materials cost Cart Path Aggregate 12mm minus	95	2.8	0.05	13	m2	$ 70	$ 931										
						i)	surface drainage structures as required on steeper grades to limit erosion				2	units	$ 300	$ 600										
						j)	Signage start , RB93 sign, post , foundation (materials cost)				1	signs	$ 295	$ 295										
						k)	signage install				1	signs	$ 500	$ 500										
							Subtotal								$ 9,709									
							overhead (see components in standard cost table)								$ 4,855									
																	$ 14,564	$ 14,564						
15				**Neighbourhood Street Connections Upper**																				
	A				Neighbourhood Street Connection/ Shared street concept with some route signage, sign posts showing basic destinations. Potential for an extended loop route from proposed highway underpass to golf course / rail trail connection.																			
						a)	Signage materials cost				8	posts and signage	$ 200	$ 1,600										
						b)	Signage installation				8	installation	$ 400	$ 3,200										
															$ 4,800									
							overhead (see components in standard cost table)								$ 2,400	$ 7,200	$ 7,200							
16				**Highway Shoulders Bike Paths**																				
	A				Paint bike lanes and symbols on Highway shoulders leading in and out of Village with the purpose of improving bike safety and warning and calming vehicles	a)	Bike lane standard (painted) 1.5 m width, west edge of pavement in, 1 line (freshen up fog line on a small portion)?	1000	1.5		1000	m	$ 2.50	$ 2,500.00										
						b)	Symbols spacing 100 metres (bike)	16400			164	symbols	$ 80.00	$ 13,120.00										
						c)	Signage start and end , sign, post , foundation (materials cost)				12	signs	$ 295	$ 3,540										
						d)	signage install				12	signs	$ 500	$ 6,000										
							Subtotal								$ 25,160									
							overhead (see components in standard cost table)								$ 12,580									
																	$ 37,740	$ 37,740						
17				**Municipal Park Trails**			Improve wayfinding in and through park																	
	A				Document and map the frequently used existing trails in park, and improve wayfinding	a)	Signage materials cost				8	posts and signage	$ 200	$ 1,600										
						b)	Signage installation				8	installation	$ 400	$ 3,200										
															$ 4,800									
							overhead (see components in standard cost table)								$ 2,400	$ 7,200	$ 7,200							
18				**4th Avenue Sidewalks**																				
	A				Add some wayfinding posts, add cosswalk at 1st St and 4th Ave.	a)	Signage materials cost				2	posts and signage	$ 200	$ 400										
						b)	Signage installation				2	installation	$ 400	$ 800										
						c)	Zebra crosswalk at Legion				1	zebra crosswalk	$ 1,100	$ 1,100										
							Subtotal								$ 2,300									
							overhead (see components in standard cost table)								$ 1,150	$ 3,450	$ 3,450							
19				**Broadway Street (Downtown Core)**																				
	A				Add a bench between 7th and 8th Avenue, add bike racks in downtown core	a)	bench between 7th and 8th Avenue on north side of Broadway				1	bench, all found	2500	2500										
						b)	bike racks				4	racks, installed	2000	8000										
							Subtotal								$ 10,500									
							overhead (see components in standard cost table)								$ 5,250	$ 15,750	$ 15,750							
20				**Avenue Connections to Waterfront**	Stairways and ramp structures to provide access to Waterfront Path elevation from south end of Avenues (1st Ave to 7th Ave)																			
	A						Construct new ramp at south end of 4th Avenue for accessible access to mid point of Waterfront Path and Spicer Gardens																	
						a)	sub grade construction, equipment and labour - Equipment complement #2 - hard/slow	72	2.0			m	$ 55.20	$ 3,974										
						b)	import fill material to build ramp, SGSB 75mm aggregate				150	m3	$ 45.00	$ 6,750										
						c)	lock blocks to contain some fill past tree (maintain the oak tree)				8	units	$ 200.00	$ 1,600										
						d)	surfacing and compaction equipment and labour	72					$ 15.04	$ 1,083										
						e)	materials cost SGSB 75mm aggregate	72	2	0.2	28.8	m3	$ 45	$ 1,296										
						f)	materials cost BASE 25mm aggregate	72	2	0.1	14.4	m3	$ 55	$ 792										
						g)	add hard surface - asphalt	72	2		144	m2	$ 50	$ 7,200										
						h)	railings for ramp as per Code , metal railings	150					$ 200	$ 30,000										
						i)	Symbols spacing 50 metres bike and pedestrian (need symbol)				7	symbols	$ 80	$ 560										
						j)	Signage start and end ,posts , foundation (materials cost)				2	signs	$ 295	$ 590										
						k)	signage install				2	signs	$ 500	$ 1,000										
							Subtotal								$ 54,845									
							overhead (see components in standard cost table)								$ 27,423	$ 82,268	$ 82,268							
							TOTAL								$ 4,387,185	$ 4,387,185	$ 4,387,185							
				Schools to Park and Beach																				

Connect Nakusp AT network plan - Budget Summary by Segment and Route					
Route	**Segment**	**Common Name**	**Description / Goals**	**Segment Cost**	**Route Cost**
Number	Upper case				
1		**Schools to Park and Beach**	Create a safe route from schools to Park and Beach		
	A	School Frontage on 4th St - 4th St to 8th St	School frontage pathway and 4th St/6th Ave crossing improvements	$ 152,799	
	B	8th Avenue (4th St to Broadway) Crosswalk and Pathway	Zebra crosswalk and painted Pathway to Park	$ 8,760	$ 161,559
2		**2nd Street Crosstown Route**	Create a quiet street east west route from Rec Centre to Hospital		
2	A	Rec Centre 2nd St /8th Avenue to 1st St/1st Ave	Rec Centre to 1st St/1st Ave - crosswalk and wayfinding signage	$ 5,100	
2	B	1st St/1st Ave past Village office to Hospital	Create a wider pathway for multi use and a safer crossing of Nelson Ave.	$ 54,204	$ 59,304
3		**Neighbourhood Street Connections West**	Create a quiet street route with connections to loop trails		
3	A		Wayfinding sign posts	$ 5,400	$ 5,400
4		**Waterfront Trail Extension to Beach**	Improve beach accessibility, use of space, and connectivity between Waterfront Path and points west with a hard surface path		
	A	Pathway extension - new construction accessible path to beach		$ 190,627	$ 190,627
4a		**Waterfront Trail Improvements from Beach to 4th St NW**			
	A	Trail realignment and improvements from beach to 4th St NW		$ 109,034	$ 109,034
5		**Waterfront Trail**	Widen / replace aging pathway to better accommodate multi uses and maintenance vehicles		
	A	Pathway replacement		$ 254,692	$ 254,692
6		**6th Avenue Pathways**	Redesign and add multi use pathway and bike lane to themain north / route in Nakusp		
	A	Multi Use Path (MUP) east side of 6th Ave from 1st St to truck bypass	Create a wide hard surface pathway to replace and widen existing sidewalks with allowance for parking, landscaping and amenities, to provide main north south connectivity through Nakusp.	$ 435,686	
	B	Bike lane west side of 6th Ave	Create a south bound bike lane to provide a safer riding experience south bound. North bound bikes could elect to use MUP on east side, or ride on the east road shoulder.	$ 9,135	$ 444,821
7		**Nest Trail**	Construct an all ages and abilities AT pathway to connect future neighbourhood with downtown core via Kuskanax West route		
	A	M2 Multi use trail to future neighbourhood	Construct an all ages and abilities AT pathway to connect future neighbourhood with downtown core	$ 86,121	$ 86,121

Connect Nakusp AT network plan - Budget Summary by Segment and Route					
Route	**Segment**	**Common Name**	**Description / Goals**	**Segment Cost**	**Route Cost**
8		**Kuskanax West route**	Construct an all ages and abilities AT pathway to connect future neighbourhood with downtown core via Kuskanax West route - including lower bridge crossing on Kuskanax		
	A	From the Waterfront Path extension to end of 16th Ave NW (Kuskanax Point)	AAA pathway from existing waterfront trail to trailhead west of Kuskanax River	$ 1,699,155	
	B	West Kuskanax River loop connection	AAA pathway up west edge of river from bridge to bridge	$ 126,423	$ 1,825,578
9		**Nature loop south**	Seasonal nature walk or paddle to underused municipal lands south of Nakusp		
	A	From Marina to south municipal lands (island then mainland)		$ 35,505	$ 35,505
10		**Upper Benches Connection**			
	A	From 4th St/ 3rd Ave northwards to rail trail	Some existing roadway, then an unmaintained trail north to railway grade (on historic roadway)	$ 44,404	
	B	From rail trail north to Upper benches via highway underpass	Construct a highway underpass, realign existing trail to abandoned road grade to provide lower grade connectivity	$ 289,300	$ 333,704
11		**Neighbourhood Street Connections East**	Wayfinding sign posts and improved access to rail trail		
	A	Quiet street connections east of 6th to Broadway and Marina		$ 26,725	$ 26,725
12		**Hospital / Rail Trail Connection**	Semi accessible (steep) connection from rail trail to hospital and downtown		
	A		Improve rail trail junction, improve surfacing and install surface water drainage structures	$ 58,899	$ 58,899
13		**Rail trail**			
	A	Truck Bypass trail paralleling Hwy 6 south of Nelson Ave	North of Nelson Ave, paralleling below Hwy 6 (truck bypass route) upgrade to M2 standard by horizontal and vertical alignment to improve grades, widen trail and improve surface condition.	$ 349,369	
	B	Rail trail from Nelson Ave. to golf course	South of Nelson Ave, on historic rail grade to golf course - bring to M2 standard by periodic subgrade repair, resurfacing and compaction. Consider aggregate additive to improve final surface and improve durability.	$ 277,677	$ 627,046
14		**Zachs / Rail Trail Connection**	Improve semi- accessible (steep) trail, add surfacing to improve short cut trail		
	A			$ 14,564	$ 14,564
15		**Neighbourhood Street Connections Upper**	Neighbourhood Street Connection/ Shared street concept with some route signage, sign posts showing basic destinations. Potential for an extended loop route from proposed highway underpass to golf course / rail trail connection.		

Connect Nakusp AT network plan - Budget Summary by Segment and Route					
Route	**Segment**	**Common Name**	**Description / Goals**	**Segment Cost**	**Route Cost**
	A			$ 7,200	$ 7,200
16		**Highway Shoulders Bike Paths**	Paint bike lanes and symbols on Highway shoulders leading in and out of Village with the purpose of improving bike safety and warning and calming vehicles		
	A			$ 37,740	$ 37,740
17		**Municipal Park Trails**	Document and map the frequently used existing trails in park, and improve wayfinding		
	A			$ 7,200	$ 7,200
18		**4th Avenue Sidewalks**	Add some wayfinding posts, add cosswalk at 1st St and 4th Ave.		
	A			$ 3,450	$ 3,450
19		**Broadway Street (Downtown Core)**	Add a rest stop and bench between 7th and 8th, and bike racks (4 racks, placeholder)		
	A			$ 15,750	$ 15,750
20		**Avenue Connections to Waterfront**	Stairways and ramp structures to provide access to Waterfront Path elevation from south end of Avenues (1st Ave to 7th Ave) - Add a ramp with railings at the south end of 4th Ave.		
	A			$ 82,268	$ 82,268
TOTAL All Routes					$ 4,387,185

Active Transportation signs and painting

MUTCDC SIGN CODE	B.C. SIGN CODE	CUSTOM SIGNS	DESCRIPTION
 RB-82	N/A		**Reserved Bicycle Lane Begins Sign** The reserved Bicycle Lane Begins sign must be installed at the beginning of the reserved lane denoting the start of the bicycle lane.
 RB-93	N/A		**Shared Pathway Sign** The Shared Pathway sign indicates that both cyclists and pedestrians are permitted to use the path.
 RB-92	N/A		**Reserved Bicycle Lane Ends Sign** The reserved Bicycle Lane Ends sign must be installed at the end of the reserved lane denoting the end of the bicycle lane.
N/A	N/A		**Multi-Use Crossing Sign** The custom Multi-Use Crossing sign is used to indicate the location of a multi-use crosswalk.

MUTCDC SIGN CODE	B.C. SIGN CODE	CUSTOM SIGNS	DESCRIPTION
		 	**Shared Street Signage** The custom Shared Street signs have been used by municipalities to demarcate the entrance to a shared street where motorists need to travel at the speed of people walking.

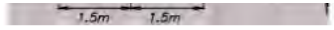
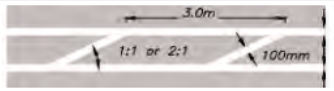
N/A	N/A		
 WC-19  WC-19S	 W-132-1 Series  W-132-1 Tab		**Share the Road Sign** Used to warn drivers that they are to provide adequate driving space for cyclists and other vehicles on the road. **Share the Road Supplementary Tab Sign** The Share the Road supplementary tab sign (WC-19S) must be used to convey the meaning of this sign.
 WC-46	 W-129-2 Series		**Pedestrian and Bicycle Crossing Ahead Sign** The Pedestrian and Bicycle Crossing Ahead sign indicates to drivers that they are approaching a location where a multi-use path crosses the road. The WC-7S Crossing Supplementary tab sign must be used to convey the meaning of the Bicycle Crossing Ahead sign.

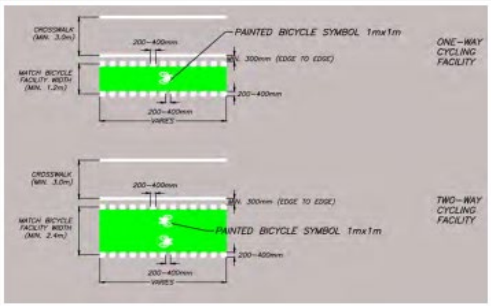
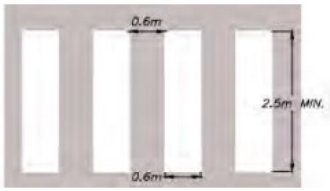
PAVEMENT MARKINGS

Pavement markings are an important element of the traffic control system for all road users. As stated in the TAC *MUTCDC*, they serve a variety of functions, including defining lanes, separating opposing traffic flows, passing controls, lane usage and designation, pedestrian crosswalks, stop lines, parking areas and symbol and word messages. Under favourable conditions, pavement markings convey information to the motorist, people walking, and people cycling without diverting their attention from the road or bikeway. However, they have limitations: they may be entirely covered by snow; they may not be clearly visible when wet; and they may have limited durability.

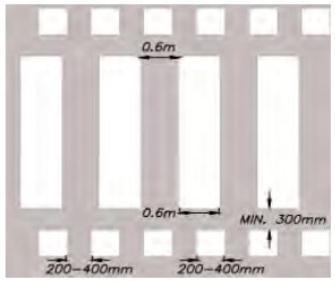
Pavement markings for bicycle and pedestrian facilities fall into three categories: longitudinal, transverse and symbol markings. The principles for the design of pavement markings are outlined in Division C1 of the TAC *MUTCDC. Pavement markings must be uniform in design position and application. Pavement markings should be designed in accordance with the design standards in Division C1 of the* TAC *MUTCDC as well as the* MOTI *Manual of Standard Traffic Signs and Pavement Markings. Design* professionals are reminded that the pavement markings included in **Appendix B are not an exhaustive** list. A more exhaustive list of available traffic control devices that includes pavement markings, signage, and signals can be found in the documents listed in the introduction of **Appendix B above.**

LONGITUDINAL		
The longitudinal pavement marking widths shown in the figures indicate the desired widths. Acceptable ranges are noted in the table below.		
Name	Dimensions	Description
Bicycle Lane (Solid)		Delineates the edge of a travel lane dedicated for bicycle use where travel is permitted in the same direction on both sides of the line.
Bicycle Lane (Dashed)		Permits motor vehicles to cross the bicycle lane to perform a turning movement.
Bicycle Lane Guidelines		Delineates the edge of bicycle travel lanes through intersections where cross-

(Dashed)		ride markings have not been installed.
Contra-Flow Lane		Separates bicycles and moving vehicles travelling in the opposite direction.
Buffered Bicycle Lane		Creates greater separation for bicycles and moving vehicles travelling in the same direction. When the width of buffer is < 300mm, the inner line can be omitted. When the width of the buffer is ≤ 600mm the diagonal hatching is optional.

Name	Dimensions	Description
Enhanced Cross-ride / Elephant's Feet at Bicycle Pathway or Multi-Use Pathway Crossing – With Green Conflict Pavement Marking		Enhanced pavement markings with green colour used to define an area for people walking and people cycling in protected bicycle lanes or separated bicycle pathways to cross intersections, laneways, and driveways. When the protected bicycle lane crosses an intersection with pedestrian facilities, the required spacing between the crosswalk and cross-ride is given.
Twin Parallel Line Crosswalk		Used to define a crossing area for people walking at intersections with traffic control, such as traffic signals or stop control. Twin parallel line crosswalks can be combined with elephant's feet markings to indicate a shared-use crossing.
Zebra Crosswalk		Used to define a crossing area for people walking at uncontrolled intersections where heightened visibility is desired and at all mid-block crossings. Zebra crosswalk markings offer greater conspicuity than twin parallel line crosswalk markings and shall be used at all school crosswalk locations. Zebra crosswalk markings may be considered at locations with large numbers or percentages of older pedestrians or locations with high activity of pedestrians with mobility or visual impairments.
Stop Bar		Used to define the location for people on bicycles to stop.

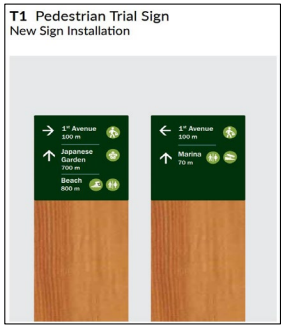
Custom Multi-Use Wayfinding Symbol		Wayfinding pavement marking to direct people on bicycles and walking along multi-use pathways.

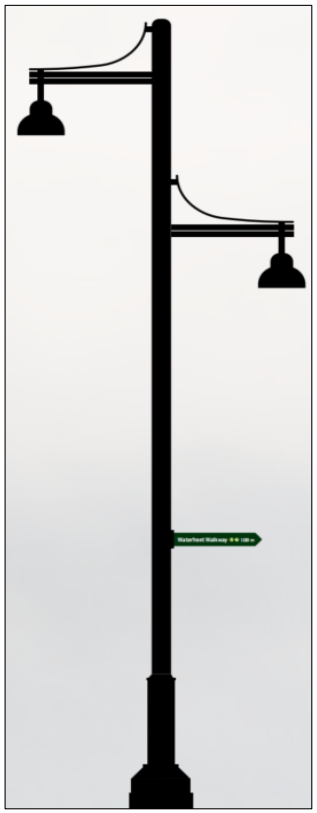
Combined Cross-ride / Elephant's Feet at Zebra Multi-Use Crossing		Used to define a combined crossing area for people cycling and walking at multi-use pathways that cross where a zebra crosswalk would be installed. **Note: The use of enhanced green pavement markings should not be used at multi-use crossings (combined cross-rides and crosswalks). The use of green should only be used for dedicated cycling facilities (see below).**

MUP markings recommended every 50-100 metres (AT Design Guide, E24)

From Nakusp Signage and Wayfinding Plan:

Wayfinding post





Standard Cost Table

COST CATEGORY		Hard $/m	Moderate $/m	Easy $/m	$/m2	$/m3	$/m3	$/day	$/hr	$/unit	Hard m/day	Moderate m/day	Easy m/day
Surfacing and materials													
Asphalt - material cost and final placement 50 mm					$ 50.00								
Suitable fill to import for subgrade						$ 15.00							
Pathway Aggregate sub base SGSB 75 mm minus						$ 45.00							
Pathway Aggregate surfacing Base 25 mm minus						$ 55.00							
Pathway Aggregate cart path topping 12 mm minus						$ 70.00							
Delivery cost included within Village													
LokBlock dimension 75cm x 75 cm x 150 cm										$ 200.00			
Barrier railing or no post curb for steep sideslope trail sections (best guess)			$ 125.00										
Concrete 32 mpa						320							
Form,place,finish concrete sidewalk $15,000/block (125 m) , includes curb finishing			$ 120.00										
Mountable curb forming all found (best guess, to be verified)			$ 30.00										
Line painting and symbology													
Line painting single line		$ 3.00	$ 2.50										
Line painting two lines			$ 5.00										
Zebra cross walk 2 lane roadway, about 8 bars? Budget $35 per m2										$ 1,100.00			
Lined cross walk, 2 lane roadway assume two wide bars $35/m2										$ 500.00			
Multi Use Pathway 3.0 m width side street crossing													
Green paint economical variety is $160 per m2	with green paint				$ 160								
	without green paint				$ 200								
Painted symbol on asphalt - MUP										$ 80.00			
Painted symbol on asphalt - bike symbol										$ 80.00			
Traffic control - in town								1600	200				
Signage													
Highway sign typical materials cost										125			
Square sign post										110			
Sign base										60			
Total sign materials cost										295			
Highway sign typical install										500			
Wayfinding wooden post and small signs (say 2 signs per post) material cost										200			
Wayfinding wooden post - installation										400			
Wayfinding galv metal u-channel post with blazer										75			
Gate													
Pathway gate / barrier - to limit access but allow maintenance vehicle access (design													
TBD) guesstimate for now										3000			
Surface drainage for aggregate pathways													
Surface drainage structure for steeper grades, open top culvert or belting diverter,													
number to install depends on grade, materials cost										300			
Boardwalk													
Boardwalk - 2.0 m width avg 1.0 m height as per USFS plans			$ 500.00										
Box Culvert for highway													
Box culvert 2500 mm headroom x 2000mm including freight and joint material			$ 4,000.00										

Pathway subgrade construction / reconstruction crew with mid size excavator- Equipment complement #1					Blended rates				
Equipment compliment including mob/demob and operator									
Target daily production (m)							50	75	100
		rate	allocation						
	135 exavator	190	100%		$ 190.00				
	50 excavator	140	100%		$ 140.00				
	smaller ride on compactor	110	50%		$ 55.00				
	tandem dump truck for removals	140	50%		$ 70.00				
	labourer all found	80	100%		$ 80.00				
	Combined			$ 4,280.00	$ 535.00				
	Unit cost $/m						**$ 85.60**	**$ 57.07**	**$ 42.80**

Pathway subgrade construction / reconstruction crew - mini excavator only - Equipment complement #2									
Equipment compliment including mob/demob and operators									
Target daily production (m)							50	100	125
		rate	allocation						
	50 excavator	140	100%		$ 140.00				
	smaller ride on compactor	110	50%		$ 55.00				
	tandem dump truck for removals	140	50%		$ 70.00				
	labourer all found	80	100%		$ 80.00				
	Combined			$ 2,760.00	$ 345.00				
	Unit cost $/m						**$ 55.20**	**$ 27.60**	**$ 22.08**

Pathway surfacing crew - Equipment complement #3									
Equipment compliment including mob/demob and operators									
Target daily production								250	
		rate	allocation						
	50 excavator	140	100%		$ 140.00				
	smaller ride on compactor	110	100%		$ 110.00				
	compact grader	140	100%		$ 140.00				
	labourer all found	80	100%		$ 80.00				
	Combined			$ 3,760.00	$ 470.00				
	Unit cost $/m							**$ 15.04**	

Budget Overhead components	
For each project segment add:	
tendering costs	5%
overhead and admin, supervision, traffic control	15%
engineering (some routes require more than others, average)	15%
contingency	15%
TOTAL toasec	50%

Route # (Not listed by priority!)	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gap Analysis	Details / questions	Length - existing structure with proposed improvements (km)	Length - proposed construction (km)	Detailed concept design status? (YES,NO, DRAFT,COMPLETE)	Typical and specific data availability and source for drawings	IMPLEMENTATION PRIORITY DECISION FRAMEWORK: Public Benefit and Impact	Strategic Alignment with Vision and Goals	Public Reach (Residents and visitors)	Ability to mitigate/manage project risks	Ability to mitigate/manage project complexities	Ease of funding <100k = H 100-500k = M >500k = L	Ease of future maintenance Easy=H Moderate=M Hard=L	Overall Priority for Implementation	Estimated cost rolled up from concept budget	Additional maintenance needs annually, periodically	Professional reports needed
1	Schools to Park and Beach	A. 4th St. NW School frontages - M1 standard pathway (constrained 2.0 m width)	Elementary School	Municipal Park /Beach	Safe street connection for school children and commuters to reach park and beach, designated path past ESB , Seniors Centre and Rec Centre parking lot to give AT users space to travel safely.	4th Avenue: Improved and new pathway / sidewalk fronting schools (2.0m wide)	4th St/ 4th Ave crosswalk	Inconsistent pathways in front of schools, lack of pathway connectivity, parking issues on 4th St, no crosswalks on 4th St - could add 3 at 4th Ave, 6th Ave, 8th Ave. Concrete barriers on east side of 6th Avenue make existing walking routes along 6th Ave unclear.	School property boundary, are logs on edge of school property, zebra crossing or lines?	0.366		no	BC AT Design Guide for MUP detail, signage and symbology. Nakusp Bylaw 437 Subdivision and Development Servicing Bylaw Nakusp Bylaw 496 Traffic, Street and Sidewalk Control Consolidated Nakusp Signage and Wayfinding Plan									$ 152,799	Sweeping. Touch up paint, eventual sidewalk replacement	
		B. 8th Avenue -M3 standard pathway (3.0 m width - painted)				8th Avenue: Painted multi use lane a	4th St/8th Ave Zebra crosswalk	Some drainage concerns at south end of 8th Ave, eventually pools on Broadway at west end of sidewalk and drains down stairway, eroding beach.	Sidewalk at Seniors Centre could be tied into the M3 pathway, and a 0.6 to 1.0 metre buffer area added on east side of sidewalk, with periodic parallel parking for mobility challenged people east of the buffer area.	0.509		no	BC AT Design Guidel for MUP detail, signage and symbology. Nakusp Bylaw 437 Subdivision and Development Servicing Bylaw Nakusp Bylaw 496 Traffic, Street and Sidewalk Control Consolidated Nakusp Signage and Wayfinding Plan									$ 8,760	Street Sweeping, snow clearing and periodic de-icing, touch up paint	
2	2nd Street Crosstown Route	A. Rec Centre to 1st St / 1st Ave - NSC standard route	Arena/Rec Complex	Hospital	Cross town east-west, quiet street connector for commuters, seniors,end point is hospital, with connection to east end of Broadway and marina and east end of waterfront trail (via route 11). 2nd St is a quieter and safer alternative to 1st St (Highway 6 in-town section)	Neighbourhood Street Connection / Shared street concept with inclusion in AT mapping, signage and wayfinding posts	Intersections with main traffic routes: 2nd St and 6th Avenue, Nesson Ave and 1st St	Identified need for a designated and centrally located cross town route to provide connectivity from Rec Centre to points east and ultimately the Hospital (with street connections via Route 11 to Marina and waterfront trail). Gaps are wayfinding and lack of some safe crossings of highway class roads within Village.	New intersections on highway sections within the Village, will need MOTI warrant approval.	0.786		no	BC AT Design Guide Nakusp Signage and Wayfinding Plan									$ 5,100	Touch up paint on crosswalks, update signage as/if required on wayfinding posts	
		B. 1st St/1st Ave. to Hospital - M1 standard pathway (2.5 m width)						Sidewalk width, curb radius and approach to 1st St/ Nelson Avenue, and lack of crosswalks at 1st St / Nelson Ave.	Installing a crosswalk at 1st St/Nelson Ave on north side of intersection is out of the main highway traffic flow, therefore approval process might be easier.	0.193		no	BC AT Design Guidel for MUP detail, signage and symbology. Nakusp Bylaw 437 Subdivision and Development Servicing Bylaw Nakusp Bylaw 496 Traffic, Street and Sidewalk Control Consolidated									$ 54,204	Touch up paint on crosswalks, update signage as/if required on wayfinding posts	
3	Neighbourhood Street Connections West	A. entire route - NSC Standard	6th Ave/10th Ave	Schools, campground, waterfront, beach, park	Quiet street connections to complete logical loop routes, on public lands, along quiet streets. Identifying these routes with favourable grades and conditions provide easy walking routes for tourists and residents. Basic wayfinding posts and digital georeferenced mapping will help tourists to wayfinding and create loop walks. Basic signage should help to calm traffic off of the main routes.	Shared street concept with some painted intersections on main routes, basic signage, and wayfinding using cap posts placed in convenient locations	Quiet streets, accessible grades and surfaces, safer walking and bike riding	People are unsure about quiet walking and riding routes through town and how to connect up to other existing trail routes. Inclusion in the AT Network, Basic mapping and wayfinding posts would help this.	Sign post locations, what density of signage makes sense. Optimize the amount of signage to limit cost and potential damage by snowplows etc.	1.651		no	AT Design Guide Nakusp Signage and Wayfinding Plan									$ 5,400	Maintaining wayfinding posts and signage	
4	Waterfront Trail Extension to Beach	A. - M1 standard (2.8 m width)	Waterfront trail west end	West end of sidewalk on Broadway	Proposed trail construction to provide accessible connection to public beach and points west. Also provides a flatter connection between the existing waterfront trail and trails west of the public beach. Would eliminate the use of stairs and steep grass slopes for mobility challenged people.	Paved multi use trail (M1) to public beach. Paved MUP 2.5 to 3.0 m wide. Design can utilize all existing benches along beach front.	Develop All Ages & Abilities connectivity to public beach from parking lot area and from Waterfront path. Opportunity for new amenities including picnic tables mid-way on flat area, addition of benches in key locations, and more and better usage of existing infrastructure at beach.	Existing very difficult access for mobility challenged people to access beach area. Awkward and steep existing connection for those wishing to connect from the waterfront pathway to points west on the waterfront extension trail to 4th St. Present lack of use of frontage area south of Japanese gardens which is a picturesque spot.	Steepest grade from conceptual design is 4%. If half of trail width is on existing sand area then existing benches at top of sand area can stay in same location, preserving as much lawn/green space as possible .		0.560	no	Roadeng Concept design to prove out location, grades and width. Typical cross section of M1 type trail (Multi Use Pathway with hard surface) Lidar based terrain model Waterfront Master Plan (in progress) BC AT Design Guide Nakusp Bylaw 437 Subdivision and Development Servicing Bylaw									$ 190,627	Sweeping and edging pathway. Crack sealing and eventual replacement of pathway. Maintenance of any amenities connected to the path. Touch up paint where lined or painted symbols.	
4a	Waterfront Trail Extension to 4th St NW	A. M2 standard	Switchback on Beach connection	4th St NW west end	Key trail segment of existing and proposed loop trails	M2 Standard Aggregate MUP - 2.5 to 3.0 m wide trail (2.0 m constrained width) - consider realigning trail to reduce steep, limiting dip section mid way. If this is done, leave existing trail intact for alternate route (some like the dip)	Connection to Kuskanax West Loop, connection to Neighbourhood Street Connections West and then to Rail Trail - all part of the wrap around Nakusp concept	Uneven surface due to erosion on steep slopes and issues with tree roots, steep grades (25% grade in and out of a dip midway) limit use and are very slippery and dangerous in winter time. The major dip in the trail prevents many potential users from using this route. Redesigned segments drop grade to maximum of 7% on north side of dip.	Property lines in vicinity of private path junction. There is potential to realign trail to reduce grade just north of this trail junction. Potential to leave both trail segments in place to give users a choice (some prefer steep!)	0.666	0.222	DRAFT	Roadeng Concept design for existing and proposed realignment to prove out location, grades and widths Lidar based terrain model Typical M2 cross section Typical M2 narrow (constrained) cross section BC AT Design Guide Nakusp Signage and Wayfinding Plan									$ 109,034	Brushing right of way and pruning back trees, removing branches and fallen trees periodically. Surface maintenance including patching with aggregegate, grading, crowning and compaction, possible treatment with aggregate binding agents. Drainage feature maintenance.	
5	Waterfront Trail	A. M1 standard	Marina	Municipal park	Key village attraction, trail itself is accessible for most users but access to the trail is challenging. Waterfront Master Plan is in progress which will speak to trail design, Connect Nakusp budget includes estimate of future path and pavement only, and proposes new ramp midway at foot of 4th Ave (see Route 20).	Bidirectional/ undivided asphalt surfaced trail, increase width to 2.8 or 3.0(?) metres to accommodate more users and maintenance pickup truck access. Address limited approach improvements also to improve accessibility.	Public gardens and lake views , stairway accesses to lake. Amenities include benches, garbage cans and picnic tables, night lighting. Very popular walking route yet much more use could be promoted. Opportunities to improve access to east, west and midway points for All Ages & Abilities	Gaps to be further identified in Waterfront Master Plan effort. Few picnic table locations. Ramp maintenance at foot of 6th Avenue (below Save on Foods) is challenging in winter. Challenging access to the trail elevation from adjoining streets for reduced mobility users. Trail width is too narrow for pickup track access, needs to be constructed wider.	Consultation information from this network plan to be passed on to Waterfront Master Plan team	0.859		NO	Typical cross section of M1 type trail (Multi Use Pathway with hard surface) Waterfront Master Plan (in progress) Lidar based imagery and terrain model BC AT Design Guide Nakusp Bylaw 437 Subdivision and Development Servicing Bylaw Nakusp Signage and Wayfinding Plan									$ 254,692	Sweeping and edging pathway. Crack sealing and eventual replacement of pathway. Maintenance of any amenities connected to the path. Touch up paint where lined or painted symbols.	

6	6th Avenue Pathways	A. East side of 6th Ave. - M1 standard	6th Ave/Broadway	6th Ave/Hwy 23 north Nakusp	Safe main routes for pedestrians, cyclists and other users. The existing condition makes it awkward for travel and very limiting in winter. Would improve safety around schools and for pedestrian travel in vicinity. Could be an attractive feature that could also greatly improve village aesthetics on main access corridor to and through the village. Elements of the downtown revitalization could be applied to this route (landscaping and amenities). If improved it would be the main north south spine route.	**On East side of 6th Avenue:** Create new MUP with asphalt top, 2.5 to 3.0 m width, (2.5 m width + 0.6 m buffer + 3.0 m for parking or amenity) with possibility to add amenity strips and parallel parking areas south of schools to Broadway as needed. There are existing sidewalks on east side of road from Broadway north to schools, but condition is varied, let downs are inconsistent, and width is too narrow for shared use.	**Intersections:** Redesign intersection at 1st Street/6th Ave to put 6th Avenue cross walk on south side of 1st Avenue, consider adding zebra crossing at 2nd Street (main cross town route). 4th St School crossing requires some barrier realignments in consideration of proposed 6th Ave M1 trail and Route 1.	AT users are unsure about best and safest route along 6th Ave. Sidewalks are typically narrow (down to 1.1 m width compared to current bylaw of 1.8 m), with uneven surface. Buffer areas beside sidewalks are inconsistent. Parking is random along route. Curb let downs are inconsistent. Some collecting water in road shoulders during storms and melt. School children and parent safety issues walking on highway shoulders north of schools. Pedestrians, bikes and scooters occupy highway shoulders.	High potential to increase AT and improve infrastructure. Potential to mirror parts of Broadway redevelopment theme on this main north south conduit in Village, and to properly allow for parking along the route. If done well it would improve aesthetics and functionality of this route for AT users and other observers.	1.247		DRAFT	Existing and proposed concept street cross sections Typical cross section of M1 type trail (Multi Use Pathway with hard surface) BC AT Design Guide Nakusp Bylaw 437 Subdivision and Development Servicing Bylaw Nakusp Bylaw 496 Traffic, Street and Sidewalk Control Consolidated Nakusp Signage and Wayfinding Plan									$ 435,686	Sweeping and edging pathway. Crack sealing and eventual replacement of pathway. Maintenance of any amenities connected to the path. Touch up paint where lined or painted symbols.	
		B. - West side of 6th Ave. - 8 standard				**On West side of 6th Ave**: Use shoulder from fog line outwards as a unidirectional bike lane. Add bike land symbology and signage. This would still allow room for a buffer strip and parallel parking in many places on the outside of the shoulder area.			End bike lane at 1st Avenue. Start MUP pathway (M1 standard) on north side of 1st St (adequate sidewalk and curb and gutter between Broadway and 1st St...)	1.958		DRAFT	Existing and proposed concept cross sections. BC AT design manual Nakusp Bylaw 496 Traffic, Street and Sidewalk Control Consolidated									$ 9,135	Snow plowing to accommodate bike lane, timely street sweeping , paint line and symbol maintenace as required, signage maintenance.	
7	Nest Trail	A. - M2 , PR standard	Kuskanax West loop	Future housing development in NW Nakusp	New proposed infrastructure that is an important for housing, active outdoor lifestyle, wise village growth.	Multi Use Path (MUP) aggregate surfaced trails, 2.5 to 3.0 metre width.	Concept trail to connect planned neighbourhood and provide AT connection to downtown Nakusp	Concept trail to provide AT connection from west of Kuskanax River to downtown Nakusp via Waterfront Trail Extension	Part of future M2 trail network connecting residential housing to Nakusp. Easy grades for AAA access. Partnership potential with developer.		1.324	no	Lidar based imagery and terrain model Typical M2 cross section BC AT Design Guide Nakusp Signage and Wayfinding Plan									$ 86,121	Brushing right of way and pruning back trees, removing branches and fallen trees periodically. Surface maintenance including patching with aggregegate, grading, crowning and compaction, possible treatment with aggregate binding agents. Drainage feature maintenance.	
8	Kuskanax West Trail	A. From the Waterfront Path extension to end of 16th Ave NW (Kuskanax Point)	Waterfront Trail extension	Future Kuskanax West residential development	New proposed infrastructure that is an important for housing, active outdoor lifestyle, wise village growth.	M2 - Multi Use Path (MUP) aggregate surfaced trails, 2.5 to 3.0 metre width.	Kuskanax River crossing and connections to West Kuskanax trails. Includes Lower Kuskanax River crossing, concept suspension bridge similar to Zucherberg Island bridge (Castlegar) but with wider deck (2.0 m) to accommodate mobility devices.	Concept trail to provide AT connection from west of Kuskanax River to downtown Nakusp via Waterfront Trail Extension	Crosses crown provincial land, license of occupation and referrals to crown agencies and First Nations required. A great partnership project with First Nations as it traverses shoreline west of village core. Partnership potential with developer.		0.934	DRAFT concept trail design - concept site plan of bridge site	Roadeng Concept design for existing and proposed realignment to prove out location, grades and widths Concept site plan for bridge options Lidar based imagery and terrain model Typical M2 cross section BC AT Design Guide Nakusp Signage and Wayfinding Plan									$ 1,699,155	Brushing right of way and pruning back trees, removing branches and fallen trees periodically. Surface maintenance including patching with aggregegate, grading, crowning and compaction, possible treatment with aggregate binding agents. Drainage feature maintenance.	
		B. West Kuskanax River loop connection				W or M2 -walking / biking path, single or double track, natural surface with aggregate as required.		Concept trail, access negotiation with private land owner will be required to link up final section to Kuskanax Highway bridge	Spectacular walk in nature, would be very popular if constructed, making a bridge to bridge loop walk or ride in a beautiful setting.		0.541		Roadeng Concept design for existing and proposed realignment to prove out location, grades and widths Lidar based imagery and terrain model Typical M2 cross section BC AT Design Guide Nakusp Signage and Wayfinding Plan									$ 126,423	Brushing right of way and pruning back trees, removing branches and fallen trees periodically. Surface maintenance including patching with aggregegate, grading, crowning and compaction, possible treatment with aggregate binding agents. Drainage feature maintenance.	
9	Nature loop south	A. - W (walking path) standard	Marina	Municipal lands south	Walking route south of marina to enjoy underutilized municipal property for bird watching, lake and mountain views and perspective views back to Village. On public land it is seasonal access, but this makes an opportunity to have a seasonal paddle route from the marina to the "island" and "mainland" portions of the municipal property.	Seasonal walking trail, single or double track where possible, partially on historic road bed, part on natural ground. Add signage and wayfinding markers to improve route and avoid trespass on private lands.	Lakeshore riparian area and island, sand beaches when the lake level is favourable. Wildlife sighting and bird watching area.	Presently an informal wander route on the shore south of Nakusp, partly on old roadway when water level is down from full pondage. No signage or route information currently. Private land restricts public access except at lower reservoir level conditions.	To make all season would require easement or lease through private land and a significant infrastucture investment. Lower elevation route bypassing private land is seasonal depending on water level. Great possibilities to have as a paddle route when water is high and destination island in the bay is above water. A great out and back destination for tourists and locals. Possible seasonal restrictions at bird nesting times?		1.126	DRAFT concept trail design no	Typical walking path stadard Typical Trail cross section drawing									$ 35,505	Maintaining wayfinding features, maintenance of possible steps from marina to start of trail. Clearing trail surface periodically, filling and raking as required to repair water damage.	
10	Upper Benches Connection	A. NSC then M2 standard from 4th St/ 3rd Ave northwards to rail trail	3rd Avenue and 4th St. east of elementary school	Rail Trail	Improve trafficability of existing pathway, provide safe access across (under) highway, and ultimately provide much easier route to upper benches. This would help to create an upper loop route in Nakusp.	Shared street standard where road is existing, otherwise M2Multi Use Pathway- Aggregate topped (2.5 to 3.0 m width). Grades would continue to be constraining for some uses/users.	Highway 6 underpass culvert, trail width, surfacing and potentially grade and surfacing improvements above and below Highway 6.	Improvements needed on path north of drivable pavement on 3rd avenue. Route is steep and therefore not universally accessible, however use would increase if improved and safe highway crossing established. South segment to rail trail/Hwy 6/truck bypass could be completed when rail trail is improved.	Surface water control needed to prevent erosion/washing of materials		0.423	no	Lidar based imagery and terrain model Typical M2 cross section BC AT Design Guide Nakusp Signage and Wayfinding Plan									$ 44,404	Brushing right of way and pruning back trees, removing branches and fallen trees periodically. Surface maintenance including patching with aggregegate, grading, crowning and compaction, possible treatment with aggregate binding agents. Drainage feature maintenance.	
		B. north of Highway 6 to connection with upper bench road system - M2 Standard	Rail trail	Upper bench areas and connections to RDCK	Semi accessible safe route to upper bench areas	Consider realigning trail above highway to reduce grade.	Better and safer connection from upper benches to Village	Existing route very steep above highway, with very sandy soils and poor trafficability unless surfaced with more granular materials.	Design and cost estimate for low cover box culvert underneath highway needed. Segment north of highway could be improved with realignment of existing trail. This was proven out by some basic fieldwork coupled with Lidar and Google Earth elevations.		0.407	Proved out the concept of reducing grade above highway by some basic fieldwork with Clinometer. No lidar available for concept design.	MOTI - TAC manual Lidar based imagery and terrain model Typical M2 cross section BC AT Design Guide Nakusp Signage and Wayfinding Plan									$ 289,300	Lighting maintenance for culvert? Brushing right of way and pruning back trees, removing branches and fallen trees periodically. Surface maintenance including patching with aggregate, grading, crowning and compaction, possible treatment with aggregate binding agents. Drainage feature maintenance.	

11	Neighbourhood Street Connections East	A. - NSC standard	Columbia Crescent	East Broadway and Marina	Quiet street connections to complete logical loop routes, traffic calming, safe route for schools commute and quiet, direct connection to downtown areas	Neighbourhood Street Connection /Shared street concept with some painted intersections on main routes, basic signage, and wayfinding using cap posts placed in convenient locations. New/ improved connection to rail trail.	Quiet streets, accessible grades, , suggested 1st Ave/1st St zebra crosswalk, much more accessible approach route to east end or waterfront path and marina	People are unsure about quiet walking and riding routes through town and how to connect up to other existing trail routes. Basic mapping and wayfinding posts would help this. Existing connection to east end of Waterfront path needs alternate route.	Discuss with MOTI about a new painted crosswalk 1st/1st to see if it meets warrant. May need a pathway leading from proposed cross walk north and south.	2.112		no	BC AT Design Guide Nakusp Signage and Wayfinding Plan								$ 26,725	Brushing right of way and pruning back trees, removing branches and fallen trees periodically. Surface maintenance including patching with aggregate, grading, crowning and compaction. Possible treatment with aggregate binding agents. Drainage feature maintenance. Wayfinding sign maintenance, touch up painting for any painted features.	
12	Hospital / Rail Trail Connection	A. - TC standard	Hospital	Rail Trail	Semi accessible connection from rail trail to hospital and downtown. For some people this could act as an alternative to travel on "government hill" Can connect to 2nd Ave NE	Aggregate surfaced MUP - 2.5 to 3.0 m wide trail , improve surfacing and surface drainage to limit maintenance requirements. Realign the junction with rail trail, improve signage. Grades would continue to be constraining for some many uses/users.	Improved subgrade and surfacing, better surface drainage	Existing steep grade (average 14% max 17%). Improved subgrade at junction with rail trail needed. Surface water control needed. Improved route signage needed including caution about trail grades/condition.	If slight grade changes made and resurfaced, some easily maintained surface drainage features would be beneficial. Consider belting design from USFS. Trail would remain steep but would be more trafficable with better surfacing. Longer term redesign to manage grades would have to be done under agreement with private land holder to the south.	0.331		DRAFT concept trail design	Roadeng Concept design for existing and proposed realignment to prove out location, grades and widths Lidar based imagery and terrain model Typical M2 cross section BC AT Design Guide Nakusp Signage and Wayfinding Plan								$ 58,899	Brushing right of way and pruning back trees, removing branches and fallen trees periodically. Surface maintenance including patching with aggregegate, grading, crowning and compaction, possible treatment with aggregate binding agents. Drainage feature maintenance.	
13	Rail trail (north truck bypass segment)	A. North of Nelson Ave, paralleling Hwy 6 (truck bypass route) - M2 standard.	6th Avenue/Hwy 6	South side of Nelson Ave intersection	A Key part of the wrap around trail, currently underutilized due to some steep grades, narrow and broken down pathway. If repaired and improved it would be a main spine route for AT traffic, a popular route for residents and tourists.	Aggregate topped multi use 2.5 to 3.0 m width, accessible grades with possibility to pave sections in the future , grade and accessibility improvements needed north of 2nd St (main intersection), these would immediately increase usage.	Main intersection Hwy 6/2nd Ave , improve grades and site distance of approaches. Realign trail north of Nelson Ave.	Trail needs subgrade and surfacing improvements. Realignment of some sections would markedly improve grades and enable use by most potential AT user groups. Issues with snow plowed onto trail from highway need to be resolved to enable year round use. At Nelson Ave: Intersection islands and markings seem to function except for approaching site distance concerns which could be addressed by vertical realignment of trail (importing material and building up approaches on both sides of Nelson Avenue.	If improvements were done then the pathway would have to have snow removal plan that matches highway plowing to enable year round use. Depends on proximity of trail to highway.	1.626		yes	Roadeng Concept design for existing and proposed realignment to prove out location, grades and widths Lidar based imagery and terrain model Typical M2 cross section BC AT Design Guide Nakusp Signage and Wayfinding Plan								$ 349,369	Brushing right of way and pruning back trees, removing branches and fallen trees periodically. Surface maintenance including patching with aggregegate, grading, crowning and compaction, possible treatment with aggregate binding agents. Drainage feature maintenance.	
	Rail Trail (south of Nelson Ave to golf course segment)	B. South of Nelson Ave, on historic rail grade to golf course - M2 standard	South side of Nelson Ave intersection	Golf course	Important spine of trail system and main wrap around loop trail	Aggregate topped multi use 2.5 to 3.0 m width, accessible grades. Motorized traffic along with AT users. Consider use of an aggregate binder to make a more durable but porous trail surface.	Fix subgrade, surface water issues and resurface south of Nelson Ave. An accessible connection with Gensick Road would improve the trail network. Future consideration for local government or trail group to negotiate private land access.	Trail needs spot subgrade repairs , restoration of trail and surfacing, and surface drainage improvements. Possible side barriers along newly repaired culvert section (steep side slopes). Currently some use of private land to access trail sections which will need permissions / easement or restricted access to limit liabilities.	Investigate and cost out aggregate additives to bond the trail surface and increase durability, considering that motorized and non- motorized users use this segment.	3.958		no	Typical cross section drawing Typical culvert drawing (USFS), Existing trail restoration drawing (USFS), Open top culvert plan Belted waterbar plan (might work well on motorized section to control surface erosion) BC AT Design Guide Nakusp Signage and Wayfinding Plan								$ 277,677	Brushing right of way and pruning back trees, removing branches and fallen trees periodically. Surface maintenance including patching with aggregegate, grading, crowning and compaction, possible treatment with aggregate binding agents. Drainage feature maintenance.	
14	Zachs / Rail Trail Connection	A. - TC standard	Hwy 6 /Zachs Rd	Rail Trail	Semi accessible connection from rail trail to Zachs Road / Hwy 6. For walkers and bikers it could act as a short cut to the rail trail, therby avoiding walking /biking on the shoulder of highway 6 (which is too narrow for considerable lengths)- would enable a separation from vehicle traffic.	slight realignment of trail possible to slightly reduce grade, improve to TC standard (ie steep M2 trail)	Hwy 6/Zachs road join and signage	Steep trail, native surface materials, muddy and slippery. Steep grade could be slightly improved, surfacing could be greatly improved to add all weather traction.	Interaction with private land boundary as trail is close to property (pin at edge of trail)	0.089		DRAFT	Roadeng Concept design for existing and proposed realignment to prove out location, grades and widths Lidar based imagery and terrain model Typical M2 cross section BC AT Design Guide Nakusp Signage and Wayfinding Plan								$ 14,564	Brushing right of way and pruning back trees, removing branches and fallen trees periodically. Surface maintenance including patching with aggregegate, grading, crowning and compaction, possible treatment with aggregate binding agents. Drainage feature maintenance.	
15	Neighbourhood Street Connections Upper	A. - NSC standard	Various locations on upper benches	Various connections to lower benches / Village core	Collector routes from upper benches. To provide quiet shared street connections.	Neighbourhood Street Connection/ Shared street concept with some route signage, capped posts showing basic destinations. Great potential for an extended loop route from proposed highway underpass to golf course / rail trail connection.		Some limited steep grades, tight corners and areas with limited site distance. Short cuts to lower benches / Nakusp core / connections to main trails could be improved to encourage AT use.	Private land agreement for potential future Gensick road connection could improve access to Rail Trail.	8.280		no	AT Design Guide Nakusp Signage and Wayfinding Plan								$ 7,200	Maintaining wayfinding posts and signage	
16	Highway Shoulders	A. B standard	Hwy 23 north, Hwy 6 south and east sections near village	Hwy 23 north, Hwy 6 south and east sections near village	Wheeled and some possible shared AT routes on Hwy shoulders should increase driver awareness, calm traffic, improve AT user safety, and prioritize seasonal maintenance	Highway shoulders with standard bike symbology - marked for logical distances from Village - north to 23 St NW, east to Upper Brouse Road, south to Crescent Bay Road. Consider also shared use (pedestrians and bikes) on some sections which are already used by pedstrians. However there are narrow shoulder areas where encouraging more use would not be adviseable.	Signage and symbology could be installed north, east, and south of Nakusp, and bike routes harmonized with other route types (Multi Use Pathways for example)	Narrow shoulders at some key locations on Highway 6 south and east. Improvements to rail trail connections would eleviate some issues for Hwy 6 east. Some potential to improve shoulder widths on Hwy 6 south to Crescent Bay Road. Future potential may be a separate pathway south, although very limited by topography. There are limited alternatives for pedestrians walking on Highway 6 shoulder south of Nakusp. If shoulders were widened a shared shoulder path may be appropriate. Harmonize highway bike routes with other pathways to offer alternative routes away from vehicle.	Potential usage of Highway shoulder or separated pathway for Hwy 6 south to Crescent Bay Rd? From highway to residences also has steep grades.	16.400		no	AT Design Guide Nakusp Signage and Wayfinding Plan MOTI TAC manual								$ 37,740	Snow plowing to accommodate bike lane, timely street sweeping , paint line and symbol maintenace as required, signage maintenance.	
17	Municipal Park Trails	A. W standard	Park entrance	Campground and adjoining streets	Internal municipal park trails to provide connectivity in and through park	Some existing aggregate surfaced multi use 2.0 to 3.0 m width coinciding with existing roads and trails, some grass or natural surfaced sections depending on season. Often snow cleared in winter making a very popular route fow walkers and dog walkers.	No further work required beyond inclusion in AT network mapping, signage and maintenance. Signage according to Signage and Wayfinding plan is already underway or completed.	Not included in any existing trail information, yet well used by people, very popular for dog walking. Add to digital trail mapping / georeferenced map products.	Winter trail clearing and parking lot clearing results in considerably more seasonal park use. Dog users are generally respectful and pick up after their pets (personal observation).	1.673		no	AT Design Guide Nakusp Signage and Wayfinding Plan								$ 7,200	Snowplowing some routes in winter. Maintaining wayfinding features, maintenance of possible steps from marina to start of trail. Clearing trail surface periodically, filling and raking as required to repair water damage.	
18	4th Avenue Sidewalks	A. S (sidewalk) standard	4th Ave / Broadway	4th Ave / 4th St	Continuous sidewalk on west side of street connecting Broadway St. with schools. Noted as an existing direct connection from schools to downtown.	No change suggested for sidewalks. Recent bylaw enforcement has resulted in vegetation clearing and better access. Curb let downs could be inspected and improved if there are accessibility concerns.	Potential to add cross walk at 4th Avenue / 1st St (Legion), presently a popular crossing. Would be a relatively easy low cost improvement.	Not included in any existing trail information, yet is a safe route between schools and downtown. Include in mapped routes and add wayfinding posts. Popular crossing point at 1st St needs a crosswalk.	Bylaw enforcement regarding vegetation trimming has improved trafficability and use of sidewalk. Curb ramps could be looked at to see if sufficient.	0.525		no	BC AT Design Guide Nakusp Bylaw 437 Subdivision and Development Servicing Bylaw Nakusp Bylaw 496 Traffic, Street and Sidewalk Control Consolidated Nakusp Signage and Wayfinding Plan								$ 3,450	Snow clearing as per Village priorities and bylaws. Encoaching vegetation maintenance. Crack sealing and eventual sidewalk replacements.	

19	Broadway Street (Downtown Core)	A. S (sidewalk) standard -2.5 m width sidewalks both sides of roadway from Nelson to 6th Avenue. Narrower sidewalks both sides of roadway from 6th to 8th Avenue. Double the road length for sidewalk length	Nelson Ave	8th Avenue	Core downtown retail and services area where many routes lead to or originate from.	Infrastructure exists - sidewalks and amenities. Between 6th and 8th Ave were recently repaired / improved surface.	Additional bench installation between Halcyon Home and post office.	Concerns about walking distance without bench from Halycon Home to post office has been voiced in past consultation.	The downtown core after revitalization efforts gets many compliments from visitors (personal observations) and residents.	1.542		no	BC AT Design Guide Nakusp Bylaw 437 Subdivision and Development Servicing Bylaw Nakusp Bylaw 496 Traffic, Street and Sidewalk Control Consolidated Nakusp Signage and Wayfinding Plan									$ 15,750	Snow clearing as per Village priorities and bylaws. Encoaching vegetation maintenance. Crack sealing and eventual sidewalk replacements.	
20	Avenue Connections to Waterfront	A. Route 20 is defined as the sidewalks, stairways and ramp(s) south of Broadway, these features are individually coded in the geodatabase	Avenues South of Broadway	Waterfront Path	Stairways and ramp structures to provide access to Waterfront Path elevation from south end of Avenues (1st Ave to 7th Ave)	Sidewalks and stairs would be periodically inspected and replaced or improved. An accessible connection to the mid point of the waterfront trail at the Spicer Gardens would be beneficial.	Additional ramp structure at waterfront trail midpoint.	Potential to improve access to mid points of Waterfront Trail. Typical challenges with winter maintenance - limited capacity and many priorities so existing ramp and pathway can take time to clear.	Concept ramp design completed to prove out possible grades and widths. See on Route multiplot.	0.7922	0.075	DRAFT	Standards documents: Building Code of BC Section 3.8 Parks Canada - Standards for Accessibility Kootenay Adaptive Sports Association (KASA)-Adaptive Trail Standards BC AT Design Guide									$ 82,268	Snow clearing as per Village priorities and bylaws. Encoaching vegetation maintenance. Crack sealing and eventual sidewalk, stair and ramp replacements.	Engineering Harmonize with Waterfront Master Plan design
TOTALS										46.0	5.2														

Connect Nakusp - AT network - General Maintenance Tasks and Schedule			
Task	**Detail**	**Timing**	**Responsibility**
Memos of Agreement (MoA) defining responsibilites and tasks by route.	If applicable to route - Annual review and amendments based on discussions / negotiations with group. Include collecting and reporting user numbers	Annually - Spring or Fall	Local government (Village and/or RDCK)
Inspection and Documentation	Semi annual inspection of trail infrastructure, including boardwalks and bridges	Bi-Annually - Spring and Fall	Village or User/Maintainer group
Vegetation Management	Clear path, path edges and surround of vegetation	As needed - weekly to annually	Village or User/Maintainer group
Water Management	maintain ditches, sloughs, culverts, dips and swales	Annually or as needed Spring or fall	Village or User/Maintainer group
Surfacing management	Repair surfacing, add materials	Annually or as needed Spring or fall	Village or User/Maintainer group
Surface repair	Crack repair on hard surface paths, aggregate surface material repairs	Spring and Fall - as needed	Village or User/Maintainer group
Grading and compaction	Grade and compact aggregate trails	Annually - spring preferable	Village or User/Maintainer group
Snow clearing and de-icing	Clear snow according to defined priorities	Winter	Village or User/Maintainer group
Sweeping	Sweeping of hard surface pathways, removal organic matter from aggregate surfaces to maintain surface and prevent growth	Bi-Annually - Spring and Fall	Village or User/Maintainer group
User numbers	Collect,compile useage numbers, from kiosk logs or other means	Annually	Village or User/Maintainer group
Trash collection	If trash receptacles part of amenities	Bi-weekly during usage season	Village or User/Maintainer group
Signage, trail markings, painting			Village or User/Maintainer group
Bridge and boardwalk repairs	Repairs to railings, surface materials, painting, staining as needed	Annually or as needed	Village or User/Maintainer group

CONNECT NAKUSP NETWORK TRAIL STANDARDS													
Standard	**Description**	**Divided**	**Directional**	**Desirable Width (m) range**	**Constrained Width (m)**	**Buffer Width (m)**	**Surface Type**	**Grade Range Goal (%)**	**Grade Max (%)**	**Clearing Width (m)**	**Clearing Height (m)**	**All Ages & Abilities Access?**	**Seasonal Access Constraint?**
M1	Multi Use Pathway (MUP) hard surface	Undivided	Bi Directional	3.0	2.7	0.6 - 2.0	Asphalt preferred	0-3	5	5.0	3.6	yes	no
M2	Multi Use Pathway (MUP) aggregate surface	Undivided	Bi Directional	3.0	2.0 (v. limited and signed as single file)	0.6 - 2.0	Well graded aggregate, well compacted, possible binder used	0-4	5	5.0	3.6	yes	no
M3	Multi Use Pathway (MUP) painted on roadway	Undivided	Bi Directional	3.0	2.7	0.6 - 2.0	Painted on Asphalt or concrete	0-3	5	5.0	open sky	yes	no
B	Bike lane on Road Shoulder	Undivided	Unidirectional	1.5-1.8	1.2	0 - 0.6	Asphalt or concrete	0-8	12	n/a	open sky	no	no
NSC	Neighbourhood Street Connection	Undivided	Bi Directional	variable	variable	n/a	Asphalt typical	0-3	8	18-20	open sky	yes	no
W	Walking Trail	Undivided	Bi Directional	0.6 -1.5	0.5	0.3	Natural with some aggregate sections as needed	0 -20	30	2.0	3.0	no	yes
S	Sidewalk	Undivided	Bi Directional	1.8 -2.5	1.35	0 - 1.5	Concrete	0-3	8	2.0 -5.0	3.0	yes	no
TC	Trail Connections	Undivided	Bi Directional	1.5 - 3.0	1.0	0 - 0.3	Well graded aggregate, occasional remnant asphalt	0 -15	20	5.0	3.6	no	maybe
R	Ramp (Accessible) with grade breaks	Undivided	Bi Directional	1.8 - 2.5	1.8	n/a	Asphalt or concrete	0-6	8	n/a	3.6	yes	no

CONNECT NAKUSP AT TRAIL STANDARDS DETAIL - SURFACING					
Standard	**Path Description**	**L1 Surface material**	**L1 Surface Depth**	**L2 BASE (25mm product) depth**	**L3 SUB BASE (75mm product) depth**
M1	Multi Use Pathway (MUP) hard surface	Asphalt	50mm	100mm	150mm+
		Concete	100mm	100mm	150mm+
M2	Multi Use Pathway (MUP), compacted aggregate surface	Cart path type aggregate (12mm minus crusher screenings)	50mm	100mm	150mm+
M3	Multi Use Pathway (MUP) painted on hard surface roadway	Existing asphalt or concrete	n/a	n/a	n/a
B	Bike lane painted on hard surface road shoulder	Existing asphalt	n/a	n/a	n/a
NSC	Neighbourhood Street Connection - existing asphalt	Existing asphalt	n/a	n/a	n/a
W	Walking Trail - natural surface and grade with some stabilized sections	Natural with some aggregate sections as needed	n/a	as/if needed for trafficability	as/if needed to stabilize subgrade
S	Sidewalk	Concrete	100mm	100mm	150mm+
TC	Trail Connections - compacted aggregate surface or remnant asphalt	Cart path type aggregate (12mm minus crusher screenings)	50mm	100mm	if required 150mm+
R	Ramp (Accessible) - hard surface with railings	Asphalt	50mm	100mm	150mm+
		Concrete	100mm	100mm	150mm+

Note: L1,L2,L3 specs are compiled from existing bylaws, trail standards, municipal standards, and are to be specified by project engineer

				IMPLEMENTATION PRIORITY DECISION FRAMEWORK								
Route #	**Route/Trail Common Name**	**Detail/Purpose/ Rationale**	**Logical segments and standards**	**Public Benefit and Impact**	**Strategic Alignment with Vision and Goals**	**Public Reach (Residents and visitors)**	**Project readiness (now=H,1-2 years =M, 3years+ = L)**	**Ability to mitigate/manage project complexities, risks**	**Ease of funding <100k = H 100-500k = M >500k = L**	**Ease of future maintenance Easy=H Moderate=M Hard=L**	**Overall Priority for Implementation**	**Estimated cost rolled up from concept budget**
1	Schools to Park and Beach	Safe connection for school children and commuters to reach park and beach, designated path past ESB , Seniors Centre and Rec Centre parking lot	A. 4th St. NW School frontages - M1 standard pathway (2.0 m width)									
			B. 8th Avenue -M3 standard pathway (3.0 m width - painted)									
2	2nd Street Crosstown Route	Cross town east-west connector for commuters, seniors, connection to east end of broadway and marina, east end of waterfront trail	A. Rec Centre to 1st St / 1st Ave - NSC standard route									
			B. 1st St/1st Ave. to Hospital - M1 standard pathway (2.5 m width)									
3	Neighbourhood Street Connections West	Trail connections to complete logical loop routes, along quiet streets, identifying routes with favourable grades and conditions will help tourists to wayfind, should help to calm traffic off of the main routes.	A. entire route - NSC Standard									
4	Waterfront Trail Extension to Beach	New trail construction to provide accessible connection to public beach and points west	A. - M1 standard (2.8 m width)									
4a	Waterfront Trail Extension to 4th St NW	Key trail segment of existing and proposed loop trails	A. M2 standard									

5	Waterfront Trail	Key village attraction, trail itself is accessible for most users but access to the trail is challenging.	A. M1 standard									
6	6th Avenue Pathways	Safe main routes for pedestrians, cyclists and other users. The existing condition makes it awkward for travel and very limiting in winter. Would improve safety aroung schools and for pedestrian travel in vicinity. Could be an attractive feature that improves village aesthetics on main access corridor to and through the village.	A. East side of 6th Ave. - M1 standard									
			B. - West side of 6th Ave. - B standard									
7	Nest Trail	Neighbourhood connections, important for housing, lifestyle, Village growth	A. - M2 , PR standard									
8	Kuskanax West Trail	AT connection to future housing projects, important for housing, lifestyle, Village growth	A. From the Waterfront Path extension to end of 16th Ave NW (Kuskanax Point)									
			B. West Kuskanax River loop connection									
9	Nature loop south	Walking route south of marina to enjoy underutilized municipal property for bird watching, lake and mountain views and perspective views back to Village.	A. - W (walking path) standard									
10	Upper Benches Connection	Improve trafficability of existing pathway, ultimately provide friendlier route to upper benches	A. NSC then M2 standard from 4th St/ 3rd Ave northwards to rail trail									

		Semi accessible safe route to upper bench areas	B. north of Highway 6 to connection with upper bench road system - M2 Standard									
11	Neighbourhood Street Connections East	Trail connections to complete logical loop routes, traffic calming, safe route for schools commute and quiet connection to downtown areas	A. - NSC standard									
12	Hospital / Rail Trail Connection	Semi accessible connection from rail trail to hospital and downtown	A. - TC standard									
13	Rail trail (north truck bypass segment)	A Key part of the wrap around trail, currently underutilized due to some steep grades and poor track. Could be a main spine for AT traffic.	A. North of Nelson Ave, paralleling Hwy 6 (truck bypass route) - M2 standard.									
	Rail Trail (south of Nelson Ave to golf course segment)	Important spine of trail system and main wrap around loop trail	B. South of Nelson Ave, on historic rail grade to golf course - M2 standard									
14	Zachs / Rail Trail Connection	Semi accessible connection from rail trail to Hwy 6, to separate AT from vehicle traffic	A. - TC standard									
15	Neighbourhood Street Connections Upper	Collector routes from upper benches	A. - NSC standard									
16	Highway Shoulders	Wheeled AT routes on Hwy shoulders will increase driver awareness, calm traffic, improve user safety, prioritize seasonal maintenance, and calm traffic	A. B standard									
17	Municipal Park Trails	Internal municipal park trails to provide connectivity in and through park	A. W standard									
18	4th Avenue Sidewalks	Continuous sidewalk on west side of street connecting Broadway St. with schools	A. S (sidewalk) standard									

19	Broadway Street (Downtown Core)	Core downtown retail and services area where many paths lead to or originate from.	A. S (sidewalk) standard -2.5 m width sidewalks both sides of roadway from Nelson to 6th Avenue. Narrower sidewalks both sides of roadway from 6th to 8th Avenue. Double the road length for sidewalk length									
20	Avenue Connections to Waterfront	Stairways and ramp structures to provide access to Waterfront Path elevation from south end of Avenues (1st Ave to 7th Ave)	A. Route 20 is defined as the sidewalks, stairways and ramp(s) south of Broadway, these features are individually coded in the geodatabase									

Funding Opportunities

Organization	Grant Name	Description	Website/Contact info
BC Ministry of Transportation and Transit (MOTT)	BC-Active Transportation Infrastructure Grants Program	Intakes are generally in September - for shovel ready projects.	https://www2.gov.bc.ca/gov/content/transportation/funding-engagement-permits/funding-grants/active-transportation-infrastructure-grants#chapter-actions
Columbia Basin Trust	ReDi grants	"Support for projects that benefit the broad community and public good through community-based decision-making" (CBT website)	https://ourtrust.org/grants-and-programs-directory/redi-grants-2/
Columbia Basin Trust	Community Development Program Grant	"The Community Development Program supports the efforts of Basin residents to address community challenges and opportunities in the Columbia Basin Trust region". (CBT website)	https://ourtrust.org/grants-and-programs-directory/community-development-program/
Infrastructure Canada	Active Transportation Fund	fund closed but similar ones may be developed	https://housing-infrastructure.canada.ca/
Federal government	Canada Community Building Fund	Community Works Fund stream	https://www.ubcm.ca/ccbf
Federal government	Canada Community Building Fund	Strategic Priorities Fund stream	https://www.ubcm.ca/ccbf
Ministry of Tourism and Immigration	Destination Development Fund	completed program but ministry may develop similar ones	https://www2.gov.bc.ca/gov/content/tourism-immigration/tourism-resources/tourism-funding-programs/destination-development-fund#eligibility
Village of Nakusp	NACFOR legacy fund	Funded by dividends from community forest	
Province of BC	Local Government Climate Action Program funding	Projects need to be linked to one or more of the objectives outlined in - CleanBC Roadmap to 2030 or - Climate Preparedness and Adaptation Strategy.	https://www2.gov.bc.ca/gov/content/environment/climate-change/local-governments/local-government-climate-action-program/local-government-climate-action-program-funding
Federation of Canadian Municipalities (FCM)	Green Municipal Fund	Some facets of project may fit under Net Zero Transformation envelope or other envelopes.	https://greenmunicipalfund.ca/
Vision Zero BC	BC Vision Zero in Road Safety Grant Program	Design and installation of low cost road safety infrastructure (Stream 1)	https://www.visionzerobc.ca/

LIST OF TYPICAL DRAWINGS	
☐	Trail terms
☐	Typical trail cross section USFS
☐	Trail Surfacing
☐	Open top culvert
☐	Belted cross drain
☐	Ditching?
☐	Typical culvert installation
☐	Typical Sidewalk
☐	Curb let down
☐	Curb widening
☐	Concept laneway cross section
☐	Concept trail stairways
☐	Signage type – trails
☐	Signage type – AT Design Guide
☐	Signage style guide from Signage and Wayfinding report
☐	Signage installation – wooden posts
☐	Signage installation – highways standards
☐	Paint and marking standards
☐	Accessible Standards for ramps
☐	Lighting
☐	Typical Boardwalk
☐	Trail restoration standards
☐	Trail clearing limits
☐	Hardened surfacing
☐	Timber safety barrier
☐	Steel railings
☐	Rock steps
☐	Trail seeding, mulching, fertilizing
☐	Swale and dip design
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6th Avenue Survey

		East												West		
Location		property line	sidewalk (m)	open shoulder / gravel	edge of pavement	paved shoulder	fog line	driving lane	centreline	driving lane	fog line	paved shoulder	edge of pavement	open shoulder, vegetation	property line	
6th Ave bus stop	cumulative measure	0	1.1		4.1		5.6		9.3		13		14.35		20	
	feature width		1.1	3.0		1.5		3.7	0	3.7		1.35		5.65		20
South school crosswalk	cumulative measure	0	1.1		4.2		5.6		9.35		13		14.7		20	
	feature width		1.1	3.1		1.4		3.75		3.65		1.7		5.3		20
north of school	cumulative measure	0			4.1		5.6		9.3		13		14.5		20	
	feature width		n/a	4.1		1.5		3.7		3.7		1.5		5.5		20
RCMP station	cumulative measure	0			4.0		5.4		9.1		12.8		14.5		20	
	feature width		n/a	4.0		1.4		3.7		3.7		1.7		5.5		20