

Application Details - TA 2015052.01, Iosco CRC, Iosco Exploration Trail Phase I, Open

Budget

Alternate 1- River Road Crossing

Original Estimated Cost OF Construction* \$1,949,000

Alternate 2- Mill Street Road Crossing

Alternative Estimated Cost of Construction \$1,703,000

Estimated Difference \$246,000

A = Estimated Cost of Construction =	\$590,912	From School to Sunset Road
B = Estimated Cost of Construction* =	\$1,358,088	From Sunset Road to River Park in Ausable Township
C = Estimated Cost of Construction =	\$1,112,088	From Sunset Road to Ausable Twp. Park East of Mill St. Bridge

Note: 1. Preliminary Cost includes Cost for Identified Right-of-way Issues.

*Note 2. The anticipated trail construction is 2018. The Mill Street Bridge Superstructure Replacement using Bridge Funding is also scheduled for 2018 and will utilize River Road as a detour route. If the River Road Trail Crossing Alternative 1 is selected, additional costs will need to be added for accessing the site by other means, like barges, if constructed concurrently.



COST BREAKDOWN FOR SECTION A

Application Details - TA 2015052.01, Iosco CRC, Iosco Exploration Trail Phase I, Open
Budget COST OF RIVER ROAD 10480 FEET OF PATH
Participating Items of Work

2/3/2017

A

Item of Work	Quantity	Unit	Unit Cost	Item Cost
Pile Driving Equipment Furn	0.00	Isum	\$82,500.00	\$0.00
Structural Steel, Mixed, Erect	0.00	lb	\$1.10	\$0.00
Riprap, Heavy	0.00	syd	\$82.50	\$0.00
Cofferdams	0.00	Isum	\$110,000.00	\$0.00
Test pile, Steel, 12 inch	0.00	each	\$2,750.00	\$0.00
Pile Point, Steel	0.00	each	\$990.00	\$0.00
Substructure Concrete	0.00	cyd	\$1,000.00	\$0.00
Prefabricated Bridge, Installed	0.00	Isum	\$55,000.00	\$0.00
Adhesive Anchoring of Horizontal Bar, 3/4 inch	0.00	each	\$19.25	\$0.00
Decorative Railing	0.00	ft	\$66.00	\$0.00
Prefabricated Bridge, Furnished	0.00	Isum	\$655,000.00	\$0.00
Mobilization Bridge	1.00	LSUM	\$0.00	\$0.00
Mobilization Path	1.00	LSUM	\$63,000.00	\$63,000.00
Embankment, CIP	2,044.00	Cyd	\$12.10	\$24,732.40
Culv End Sect, 12 inch	22.00	Each	\$333.00	\$7,326.00
Culv, Cl A, 12 inch	380.00	Ft	\$45.00	\$17,100.00
Shared use Path, Aggregate	4,310.00	Ton	\$17.00	\$73,270.00
Shared use Path, HMA	1,328.00	Ton	\$99.00	\$131,472.00
Pavt Mrkg, Ovly Cold Plasting, 12 inch Crosswalk	0.00	Ft	\$6.00	\$0.00
Bollards	21.00	Each	\$600.00	\$12,600.00
Clearing	1.00	Each	\$8,000.00	\$8,000.00
Erosion Control, Check Dam, Stone	54.00	Ft	\$24.20	\$1,306.80
Erosion Control, Silt Fence	10,480.00	Ft	\$2.12	\$22,217.60
Detectable Warning Surface	136.00	Ft	\$43.60	\$5,929.60
Pavt Mrkg, Ovly Cold Plasting, 6 inch Crosswalk	1,018.00	Ft	\$3.32	\$3,379.76
Minor Traf Devices	1.00	LSUM	\$59,000.00	\$59,000.00
8" Sch Carbon Steel Pipe w/Insulation	0.00	Ft	\$55.00	\$0.00
Erosion Control, Sediment Trap	3.00	Each	\$97.00	\$291.00
Shared Use Path, Grading	10,480.00	Ft	\$10.40	\$108,992.00
Turf Establishment, Performance	12,500.00	Syd	\$3.50	\$43,750.00
Riprap, Plain	30.00	Syd	\$53.25	\$1,597.50
Heat Tape	0.00	LSUM	\$49,500.00	\$0.00
Sign, Type W3-1 Stop Ahead Sign	11.00	Each	\$181.00	\$1,991.00
Sign, Type W16-1P Share the Road & W11-1 Bike	1.00	Each	\$220.00	\$220.00
Pile, Steel, fun and driven, 12 inch	0.00	Ft	\$5.50	\$0.00
Structural Steel, Mixed, Furn and Fab	0.00	Lb	\$8.25	\$0.00
D11-1 Bicycle Route & M6-1 Arrow Combination	2.00	Each	\$181.00	\$362.00
R1-1 Stop Sign	12.00	Each	\$181.00	\$2,172.00
Leak Sensor	0.00	Each	\$1,100.00	\$0.00
Sign, Type W1-1 Railroad sign	2.00	Each	\$181.00	\$362.00
Erosion Control, Turbidity Curtain, Deep	0.00	Ft	\$27.50	\$0.00
Reinforcement, Steel, Epoxy Coated	0.00	Lb	\$1.65	\$0.00
Shared use Path, Conc	46.00	Syd	\$40.00	\$1,840.00
Air Release Drain Line & Collection Structure	0.00	LSUM	\$5,500.00	\$0.00
Connect to Existing DI/CI Piping	0.00	Each	\$2,500.00	\$0.00
Application Details - TA 2015052.01, Iosco CRC, Iosco Exploration Trail Phase I, Open				
Electric and Controls	0.00	LSUM	\$5,500.00	\$0.00
Flush and Remove Existing Force Main	0.00	LSUM	\$15,000.00	\$0.00
8" Carbon Steel and 12" Containment Pipe	0.00	Ft	\$154.00	\$0.00
Air Release Valve Structure	0.00	Each	\$2,750.00	\$0.00
Connect to Existing Pump Station	0.00	Each	\$4400.00	\$0.00
Guardrail, Rem	0.00	Ft	\$2.00	\$0.00
Conc. Headwall	0.00	Cyd	\$1,500.00	\$0.00
CULV, CONC. ARCH IV, 18 FEET	0.00	Ft	\$3,500.00	\$0.00
Guardrail Approach, Terminal, Type 1B	0.00	Each	\$1,700.00	\$0.00
Guardrail, Backed, Det E2	0.00	Each	\$1500.00	\$0.00
Guardrail, Type B	0.00	Ft	\$16.00	\$0.00
Embankment, CIP	0.00	Cyd	\$13.00	\$0.00
Guardrail, Rem	0.00	Ft	\$2.00	\$0.00
Conc. Headwall	0.00	Cyd	\$1,500.00	\$0.00
CULV, CL A, Conc, 36 inch	0.00	Ft	\$200.00	\$0.00
Guardrail Approach, Terminal, Type 1B	0.00	Each	\$1,700.00	\$0.00
Guardrail, Backed, Det E2	0.00	Each	\$1500.00	\$0.00
Guardrail, Type B	0.00	Ft	\$16.00	\$0.00
Embankment, CIP	0.00	Cyd	\$13.00	\$0.00
Culv, Slp End Sect, 1 on 4, 36 inch, Transv	0.00	Each	\$1,500.00	\$0.00
TOTAL COST OF NEW PATH WAY ALIGNMENT				\$590,911.66

COST BREAKDOWN FOR SECTION B

Application Details - TA 2015052.01, Iosco CRC, Iosco Exploration Trail Phase I, Open

2/3/2017

Budget

COST OF RIVER ROAD 800 FEET OF PATH and BRIDGE W/UTILITIES COST

B

Participating Items of Work

Item of Work	Quantity	Unit	Unit Cost	Item Cost
Pile Driving Equipment Furn	1.00	Isum	\$82,500.00	\$82,500.00
Structural Steel, Mixed, Erect	2,000.00	lb	\$1.10	\$2,200.00
Riprap, Heavy	200.00	syd	\$82.50	\$16,500.00
Cofferdams	1.00	Isum	\$110,000.00	\$110,000.00
Test pile, Steel, 12 inch	2.00	each	\$2,750.00	\$5,500.00
Pile Point, Steel	8.00	each	\$990.00	\$7,920.00
Substructure Concrete	50.00	cyd	\$1,000.00	\$50,000.00
Prefabricated Bridge, Installed	1.00	Isum	\$55,000.00	\$55,000.00
Adhesive Anchoring of Horizontal Bar, 3/4 inch	150.00	each	\$19.25	\$2,887.50
Decorative Railing	120.00	ft	\$66.00	\$7,920.00
Prefabricated Bridge, Furnished	1.00	Isum	\$655,000.00	\$655,000.00
Mobilization Bridge	1.00	LSUM	\$104,000.00	\$104,000.00
Mobilization Path	1.00	LSUM	\$13,000.00	\$13,000.00
Embankment, CIP	156.00	Cyd	\$12.10	\$1,887.60
Culv End Sect, 12 inch	2.00	Each	\$333.00	\$666.00
Culv, CI A, 12 inch	20.00	Ft	\$45.00	\$900.00
Shared use Path, Aggregate	290.00	Ton	\$17.00	\$4,930.00
Shared use Path, HMA	120.00	Ton	\$99.00	\$11,880.00
Pavt Mrkg, Ovly Cold Plasting, 12 inch Crosswalk	56.00	Ft	\$6.00	\$336.00
Bollards	5.00	Each	\$600.00	\$3,000.00
Clearing	1.00	Each	\$2,000.00	\$2,000.00
Erosion Control, Check Dam, Stone	4.00	Ft	\$24.20	\$96.80
Erosion Control, Silt Fence	800.00	Ft	\$2.12	\$1,696.00
Detectable Warning Surface	24.00	Ft	\$43.60	\$1,046.40
Pavt Mrkg, Ovly Cold Plasting, 6 inch Crosswalk	60.00	Ft	\$3.32	\$199.20
Minor Traf Devices	1.00	LSUM	\$16,000.00	\$16,000.00
8" Sch Carbon Steel Pipe w/Insulation	100.00	Ft	\$55.00	\$5,500.00
Erosion Control, Sediment Trap	1.00	Each	\$97.00	\$97.00
Shared Use Path, Grading	800.00	Ft	\$10.40	\$8,320.00
Turf Establishment, Performance	1,000.00	Syd	\$3.50	\$3,500.00
Riprap, Plain	42.00	Syd	\$53.25	\$2,236.50
Heat Tape	1.00	LSUM	\$49,500.00	\$49,500.00
Sign, Type W3-1 Stop Ahead Sign	2.00	Each	\$181.00	\$362.00
Sign, Type W16-1P Share the Road & W11-1 Bike	1.00	Each	\$220.00	\$220.00
Pile, Steel, fun and driven, 12 inch	360.00	Ft	\$5.50	\$1,980.00
Structural Steel, Mixed, Furn and Fab	2,000.00	Lb	\$8.25	\$16,500.00
D11-1 Bicycle Route & M6-1 Arrow Combination	2.00	Each	\$181.00	\$362.00
R1-1 Stop Sign	1.00	Each	\$181.00	\$181.00
Leak Sensor	1.00	Each	\$1,100.00	\$1,100.00
Sign, Type W1-1 Railroad sign	0.00	Each	\$181.00	\$0.00
Erosion Control, Turbidity Curtain, Deep	400.00	Ft	\$27.50	\$11,000.00
Reinforcement, Steel, Epoxy Coated	10,000.00	Lb	\$1.65	\$16,500.00
Shared use Path, Conc	30.00	Syd	\$40.00	\$1,200.00
Air Release Drain Line & Collection Structure	1.00	LSUM	\$5,500.00	\$5,500.00
Connect to Existing DI/CI Piping	1.00	Each	\$2,500.00	\$2,500.00
Application Details - TA 2015052.01, Iosco CRC, Iosco Exploration Trail Phase I, Open				
Electric and Controls	1.00	LSUM	\$5,500.00	\$5,500.00
Flush and Remove Existing Force Main	1.00	LSUM	\$15,000.00	\$15,000.00
8" Carbon Steel and 12" Containment Pipe	305.00	Ft	\$154.00	\$46,970.00
Air Release Valve Structure	1.00	Each	\$2,750.00	\$2,750.00
Connect to Existing Pump Station	1.00	Each	\$4,400.00	\$4,400.00
Guardrail, Rem	0.00	Ft	\$2.00	\$0.00
Conc. Headwall	0.00	Cyd	\$1,500.00	\$0.00
CULV, CONC. ARCH IV, 18 FEET	0.00	Ft	\$3,500.00	\$0.00
Guardrail Approach, Terminal, Type 1B	0.00	Each	\$1,700.00	\$0.00
Guardrail, Backed, Det E2	0.00	Each	\$1500.00	\$0.00
Guardrail, Type B	0.00	Ft	\$16.00	\$0.00
Embankment, CIP	0.00	Cyd	\$13.00	\$0.00
Guardrail, Rem	0.00	Ft	\$2.00	\$0.00
Conc. Headwall	0.00	Cyd	\$1,500.00	\$0.00
CULV, CL A, Conc, 36 inch	0.00	Ft	\$200.00	\$0.00
Guardrail Approach, Terminal, Type 1B	0.00	Each	\$1,700.00	\$0.00
Guardrail, Backed, Det E2	0.00	Each	\$1500.00	\$0.00
Guardrail, Type B	0.00	Ft	\$16.00	\$0.00
Embankment, CIP	0.00	Cyd	\$13.00	\$0.00
Culv, Slp End Sect, 1 on 4, 36 inch, Transv	0.00	Each	\$1,500.00	\$0.00
TOTAL COST OF NEW PATH WAY ALIGNMENT				\$1,358,244.00

COST BREAKDOWN FOR SECTION C

Application Details - TA 2015052.01, losco CRC, losco Exploration Trail Phase I, Open
Budget COST OF NEW 4,400 FEET OF PATH
Participating Items of Work

2/3/2017
C

Item of Work	Quantity	Unit	Unit Cost	Item Cost
Pile Driving Equipment Furn	0.00	lsum	\$82,500.00	\$0.00
Structural Steel, Mixed, Erect	0.00	lb	\$1.10	\$0.00
Riprap, Heavy	0.00	syd	\$82.50	\$0.00
Cofferdams	0.00	lsum	\$110,000.00	\$0.00
Test pile, Steel, 12 inch	0.00	each	\$2,750.00	\$0.00
Pile Point, Steel	0.00	each	\$990.00	\$0.00
Substructure Concrete	0.00	cyd	\$1,000.00	\$0.00
Prefabricated Bridge, Installed	0.00	lsum	\$55,000.00	\$0.00
Adhesive Anchoring of Horizontal Bar, 3/4 inch	0.00	each	\$19.25	\$0.00
Decorative Railing	0.00	ft	\$66.00	\$0.00
Prefabricated Bridge, Furnished	1.00	lsum	\$434,000.00	\$434,000.00
Mobilization Bridge	1.00	LSUM	\$43,400.00	\$43,400.00
Mobilization Path	1.00	LSUM	\$58,045.00	\$58,045.00
Embankment, CIP	860.00	Cyd	\$12.10	\$10,406.00
Culv End Sect, 12 inch	0.00	Each	\$333.00	\$0.00
Culv, CI A, 12 inch	0.00	Ft	\$45.00	\$0.00
Shared use Path, Aggregate	1,420.00	Ton	\$17.00	\$24,140.00
Shared use Path, HMA	574.00	Ton	\$99.00	\$56,826.00
Pavt Mrkg, Ovly Cold Plasting, 12 inch Crosswalk	240.00	Ft	\$6.00	\$1,440.00
Bollards	6.00	Each	\$600.00	\$3,600.00
Clearing	1.00	Each	\$10,000.00	\$10,000.00
Erosion Control, Check Dam, Stone	23.00	Ft	\$24.20	\$556.60
Erosion Control, Silt Fence	3,925.00	Ft	\$2.12	\$8,321.00
	72.00	Ft	\$43.60	\$3,139.20
Pavt Mrkg, Ovly Cold Plasting, 6 inch Crosswalk	360.00	Ft	\$3.32	\$1,195.20
Minor Traf Devices	1.00	LSUM	\$26,100.00	\$26,100.00
8" Sch Carbon Steel Pipe w/Insulation	0.00	Ft	\$55.00	\$0.00
Erosion Control, Sediment Trap	2.00	Each	\$97.00	\$194.00
Shared Use Path, Grading	3,925.00	Ft	\$10.40	\$40,820.00
Turf Establishment, Performance	5,300.00	Syd	\$3.50	\$18,550.00
Riprap, Plain	90.00	Syd	\$53.25	\$4,792.50
Heat Tape	0.00	LSUM	\$49,500.00	\$0.00
Sign, Type W3-1 Stop Ahead Sign	6.00	Each	\$181.00	\$1,086.00
Sign, Type W16-1P Share the Road & W11-1 Bike	2.00	Each	\$220.00	\$440.00
Pile, Steel, fun and driven, 12 inch	0.00	Ft	\$5.50	\$0.00
Structural Steel, Mixed, Furn and Fab	0.00	Lb	\$8.25	\$0.00
D11-1 Bicycle Route & M6-1 Arrow Combination	4.00	Each	\$181.00	\$724.00
R1-1 Stop Sign	6.00	Each	\$181.00	\$1,086.00
Leak Sensor	0.00	Each	\$1,100.00	\$0.00
Sign, Type W1-1 Railroad sign	0.00	Each	\$181.00	\$0.00
Erosion Control, Turbidity Curtain, Deep	0.00	Ft	\$27.50	\$0.00
Reinforcement, Steel, Epoxy Coated	0.00	Lb	\$1.65	\$0.00
Shared use Path, Conc	76.00	Syd	\$40.00	\$3,040.00
Air Release Drain Line & Collection Structure	0.00	LSUM	\$5,500.00	\$0.00
Connect to Existing DI/CI Piping	0.00	Each	\$2,500.00	\$0.00
Application Details - TA 2015052.01, losco CRC, losco Exploration Trail Phase I, Open				
CULV, CL A, CSP, 144 inch		Ft	\$900.00	\$0.00
Guardrail Approach, Terminal, Type 1B		Each	\$1,700.00	\$0.00
Guardrail, Backed, Det E2		Each	\$1500.00	\$0.00
Guardrail, Type B		Ft	\$16.00	\$0.00
Embankment, CIP		Cyd	\$13.00	\$0.00
Guardrail, Rem		Ft	\$2.00	\$0.00
Conc. Headwall		Cyd	\$1,500.00	\$0.00
CULV, CONC. ARCH IV, 18 FEET		Ft	\$3,500.00	\$0.00
Guardrail Approach, Terminal, Type 1B		Each	\$1,700.00	\$0.00
Guardrail, Backed, Det E2		Each	\$1500.00	\$0.00
Guardrail, Type B		Ft	\$16.00	\$0.00
Embankment, CIP		Cyd	\$13.00	\$0.00
Guardrail, Rem		Ft	\$2.00	\$0.00
Conc. Headwall		Cyd	\$1,500.00	\$0.00
CULV, CL A, Conc, 36 inch	25.00	Ft	\$200.00	\$5,000.00
Guardrail Approach, Terminal, Type 1B	2.00	Each	\$1,700.00	\$3,400.00
Guardrail, Backed, Det E2	0.00	Each	\$1500.00	\$0.00
Guardrail, Type B	50.00	Ft	\$16.00	\$800.00
Embankment, CIP	276.00	Cyd	\$13.00	\$3,588.00
Culv, Slp End Sect, 1 on 4, 36 inch, Transv	1.00	Each	\$1,500.00	\$1,500.00
10' Wide Boardwalk (300 lf)	300.00	Each	\$400.00	\$120,000.00
34" High Hand Rails (300 lf)	300.00	Each	\$115.00	\$34,500.00
Piers (70 each)	70.00	Each	\$500.00	\$35,000.00
Premanufactured Bridges Complete	2.00	Each	\$78,000.00	\$156,000.00
TOTAL COST OF NEW PATH WAY ALIGNMENT				\$1,111,689.50

COST BREAKDOWN FOR ORIGINAL ESTIMATE

Application Details - TA 2015052.01, Iosco CRC, Iosco Exploration Trail Phase I, Open				
Budget		Original Estimate		
Participating Items of Work				
Item of Work	Quantity	Unit	Unit Cost	Item Cost
Pile Driving Equipment Furn	1.00	lsum	\$82,500.00	\$82,500.00
Structural Steel, Mixed, Erect	2,000.00	lb	\$1.10	\$2,200.00
Riprap, Heavy	200.00	syd	\$82.50	\$16,500.00
Cofferdams	1.00	lsum	\$110,000.00	\$110,000.00
Test pile, Steel, 12 inch	2.00	each	\$2,750.00	\$5,500.00
Pile Point, Steel	8.00	each	\$990.00	\$7,920.00
Substructure Concrete	50.00	cyd	\$1,000.00	\$50,000.00
Prefabricated Bridge, Installed	1.00	lsum	\$55,000.00	\$55,000.00
Adhesive Anchoring of Horizontal Bar, 3/4 inch	150.00	each	\$19.25	\$2,887.50
Decorative Railing	120.00	ft	\$66.00	\$7,920.00
Prefabricated Bridge, Furnished	1.00	lsum	\$655,000.00	\$655,000.00
Mobilization Bridge	1.00	LSUM	\$121,097.18	\$121,097.18
Mobilization Path	1.00	Each	\$58,902.82	\$58,902.82
Embankment, CIP	2,200.00	CYD	\$12.10	\$26,620.00
Culv End Sect, 12 inch	24.00	each	\$333.00	\$7,992.00
Culv, CI A, 12 inch	400.00	feet	\$45.00	\$18,000.00
Shared Use Path Aggregate	4,600.00	Ton	\$17.00	\$78,200.00
Shared Use Path, HMA	1,448.00	Ton	\$99.00	\$143,352.00
Pavement Markg, only Cold Plasting, 12 inch Crosswalk	56.00	ft	\$6.00	\$336.00
Bollards	26.00	Each	\$600.00	\$15,600.00
Clearing	1.00	each	\$10,000.00	\$10,000.00
Erosion Control, Check Dam, Stone	58.00	FT	\$24.20	\$1,403.60
Erosion Control, Silt Fence	11,280.00	ft	\$2.12	\$23,913.60
Detectable Warning Surface	160.00	ft	\$43.60	\$6,976.00
Pavement Markg, Ovly Cold Plastic, 6 inch Crossw	1,078.00	ft	\$3.32	\$3,578.96
Minor Traffic Devices	1.00	lump sum	\$75,000.00	\$75,000.00
8" Sch Carbon Steel Pipe w/Insulation	100.00	lf	\$55.00	\$5,500.00
Erosion Control, Sediment Trap	4.00	each	\$97.00	\$388.00
Shard Use Path, Grading	11,280.00	ft	\$10.40	\$117,312.00
Turf Establishment, Performance	13,500.00	syd	\$3.50	\$47,250.00
Riprap, Plain	72.00	Syd	\$53.25	\$3,834.00
Heat Tape	1.00	lump sum	\$49,500.00	\$49,500.00
W3-1 Stop Ahead Sign	13.00	each	\$181.00	\$2,353.00
W16-1P Share the Road & W11-1 Bike	2.00	each	\$220.00	\$440.00
Pile, Steel, fun and driven, 12 inch	360.00	ft	\$5.50	\$1,980.00
Structural Steel, Mixed, Furn and Fab	2,000.00	lb	\$8.25	\$16,500.00
D11-1 Bicycle Route & M6-1 Arrow Combination	4.00	each	\$181.00	\$724.00
R1-1 Stop Sign	13.00	each	\$181.00	\$2,353.00
Leak Sensor	1.00	each	\$1,100.00	\$1,100.00
W1-1 Railroad sign	2.00	each	\$181.00	\$362.00
Erosion Control, Turbidity Curtain, Deep	400.00	ft	\$27.50	\$11,000.00
Reinforcement, Steel, Epoxy Coated	10,000.00	lb	\$1.65	\$16,500.00
Shared use Path, Concrete	76.00	syd	\$40.00	\$3,040.00
Air Release Drain Line & Collection Structure	1.00	lump sum	\$5,500.00	\$5,500.00
Connect to Existing DI/CI Piping	1.00	each	\$2,500.00	\$2,500.00
Application Details - TA 2015052.01, Iosco CRC, Iosco Exploration Trail Phase I, Open				
Electric and Controls		1.00 lum sum	\$5,500.00	\$5,500.00
Flush and Remove Existing Force Main		1.00 lump sum	\$15,000.00	\$15,000.00
8" Carbon Steel and 12" Containment Pipe	305.00	lf	\$154.00	\$46,970.00
Air Release Valve Structure		1.00 each	\$2,750.00	\$2,750.00
Connect to Existing Pump Station		1.00 each	\$4,400.00	\$4,400.00
Total:				\$1,949,155.66