

PROJECT COSTS

The total project length is 11.79 miles from Pittsburgh to Coraopolis. The majority of the connector route, 9 miles between McKees Rocks and Coraopolis, is estimated at \$1 million for improvements. Of that amount, \$100,000 is for accessibility and ADA compliance upgrades at key intersections and \$500,000 is for a ramp/underpass connection to the Montour Trail at the Montour Junction Sports Complex. The remaining cost includes shoulder pavement widening, roadway signs, pavement markings, and sidewalks.

The study recommends a separated and protected cycle-walking track along West Carson Street. This is vital link in the project. The 2.5 mile section from Pittsburgh's Station Square driveway to the McKees Rocks includes the newly designed roadway by PennDOT. The preferred bicycle route improvements, a separated and protected pedestrian-bicycle track, are estimated at an additional \$2.5 and \$5 million. Since PennDOT just completed plans for West Carson Street (West End Bridge to McKees Rocks), the study includes only detailed cost estimates for a portion of a protected cycle track along West Carson Street- (\$500,000) from the Pacific Pride Gas Station to the beginning of the new road design.

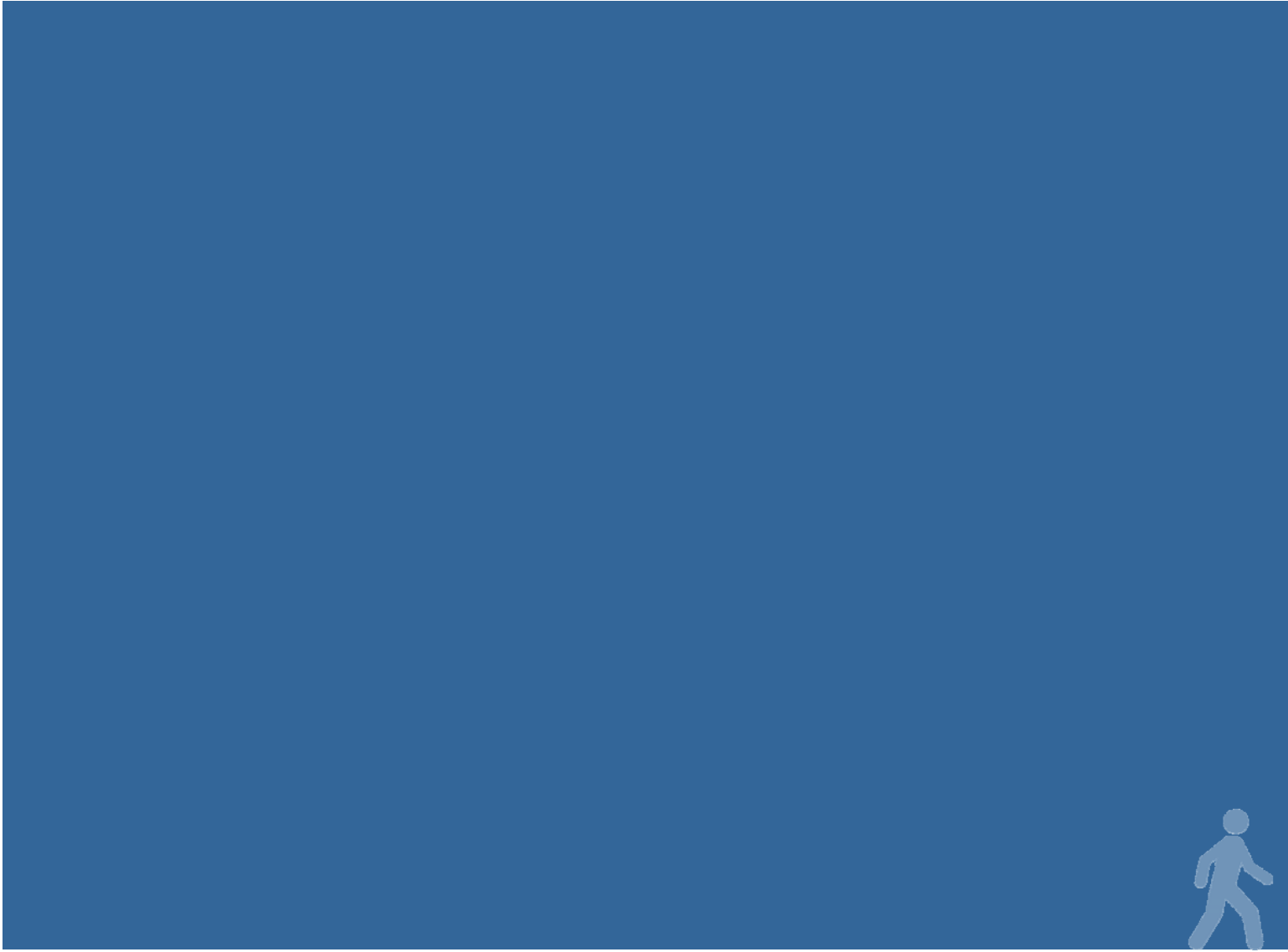
Completion of a separated and protected track along the entire length of West Carson Street would significantly increase the bicycle level of service and the number of users, both local commuters and visitors, traveling to and spending money in the City of Pittsburgh and in it's neighborhoods.

Three Rivers Heritage Trail Connector				
Summary- Opinion of Probable Costs				
Prepared By: Mackin Engineering Company				
6/10/2013				
<i>Estimates are rounded up and listed as a range of dollars for budgeting</i>				
ROUTE DESCRIPTION/LOCATION		LENGTH (MILES)	COST Between	
1	City of Pittsburgh- (SR51)West Carson Street, Pacific Pride Gas Station to beginning of PennDOT Project- near West End Bridge	0.54	\$ 438,000.00	& \$ 526,000.00
2	City of Pittsburgh (SR51) West Carson Street, West End Bridge to McKees Rocks	1.92	\$ 2,500,000.00	& \$ 5,000,000.00
3	McKees Rocks 'Bottoms'- West Carson Street, River Avenue, Helen St. to McKees Rocks Bridge	1.19	\$ 39,000.00	& \$ 46,000.00
4	Stowe Township- Local Roads off of McKees Rocks Bridge to Island Avenue (SR51) and Fleming Park Bridge	1.53	\$ 165,000.00	& \$ 298,000.00
5	Neville Island- Neville Road and Grand Avenue (Allegheny County Roadways)	4.67	\$ 290,000.00	& \$ 348,000.00
6	Coraopolis- (SR51) Fourth Avenue and Fifth Avenue	1.94	\$ 28,000.00	& \$ 33,000.00
7	Coraopolis- Montour Trail Connection	N/A	\$ 445,000.00	& \$ 534,000.00
8	Intersection Improvements	N/A	\$ 95,000.00	& \$ 113,000.00
<i>Intersection Improvements include only major intersections along the Preferred Route</i>				
Total Miles		11.79		
TOTAL			\$ 4,000,000.00	& \$ 6,898,000.00
NOTES:				
<i>Above Totals include West Carson Major Reconstruction for Separated Ped-Bike Track</i>				
1	All 4" white and yellow linear pavement markings have been priced using waterborne paint. The use of hot thermoplastic pavement markings will increase the longevity of the pavement markings and decrease maintenance requirements, but the cost of hot thermoplastic markings are significantly higher (approx 10X the paint cost).			
2	All pavement symbols (Sharrows and Bike Route) in high traffic areas have been priced using hot thermoplastic pavement markings to maximize longevity.			
3	Additional concrete sidewalk repairs and sidewalk extensions would add to subtotal costs- Concrete sidewalk costs can range between \$8-\$10/SY for materials and labor.			
*	West Carson Street (SR51) separated and protected ped-bike track ranges in cost based on options listed in route description			





Opinion of Probable Costs



Three Rivers Heritage Trail Connector

Summary- Opinion of Probable Costs

Prepared By: Mackin Engineering Company

11/8/2012

Estimates are rounded up and listed as a range of dollars for budgeting

ROUTE DESCRIPTION/LOCATION	LENGTH (MILES)	COST Between		
SR51, Station Square to West End Bridge (City of Pittsburgh)	0.54	\$	438,000.00	\$ 526,000.00
* West End Bridge to Corliss Tunnel (City of Pittsburgh)	0.83	\$	-	\$ -
* Corliss Tunnel to McKees Rocks	1.09	\$	-	\$ -
West Carson Street, Stanhope Street, Linden Avenue, Chartiers Avenue to Island Avenue (all SR51) in McKees Rocks	0.48	\$	39,000.00	& \$ 46,000.00
Island Avenue (SR51) Stowe Township; Chartiers / Island Ave Intersection to McKees Rocks Bridge	0.6	\$	11,000.00	& \$ 14,000.00
McKees Rocks Bridge (SR51) to Tunnel Way in Stowe Township	0.34	\$	11,000.00	& \$ 13,000.00
Island Avenue (SR51) Stowe Township, Tunnel Way to Fleming Park Bridge	1.09	\$	29,000.00	& \$ 35,000.00
Neville Road along Neville Island	4.67	\$	290,000.00	& \$ 348,000.00
State Route 51 Coraopolis	1.94	\$	24,000.00	& \$ 29,000.00
Montour Trail Connection	N/A	\$	442,000.00	& \$ 530,000.00
Intersection Improvements	N/A	\$	95,000.00	& \$ 113,000.00
<i>Intersection Improvements include only major intersections along the Direct Route</i>				
Total Miles	11.58			
TOTAL		\$	1,379,000.00	& \$ 1,654,000.00

NOTES:				
1	All 4" white and yellow linear pavement markings have been priced using waterborne paint. The use of hot thermoplastic pavement markings will increase the longevity of the pavement markings and decrease maintenance requirements, but the cost of hot thermoplastic markings are significantly higher (approx 10X the cost).			
2	All pavement symbols (Sharrows and Bike Route) in high traffic areas have been priced using hot thermoplastic pavement markings to maximize longevity.			
3	Additional concrete sidewalk repairs and sidewalk extensions would add to subtotal costs- Concrete sidewalk costs can range between \$8-\$10/SY for materials and labor.			
*	This connector segment cost is not listed in summary total- this segment is being constructed by PennDOT.			

Three Rivers Heritage Trail Connector

Opinion of Probable Costs

SR51, Station Square to West End Bridge (City of Pittsburgh)

Prepared By: Mackin Engineering Company

11/8/2012

Segment length - 2,861 LF (.54 miles)

DESCRIPTION	UNIT	QTY	UNIT COST	SUBTOTAL	COMMENTS
Direct Main Alignment Route					
Pacific Pride Gas Station to Start Work Station of JMT RT51 Construction Project - 1,900 LF					
Clearing and Grubbing	AC	0.5	\$4,000	\$ 2,000.00	misc. material removal adjacent to proposed ped-bikeway track
Class 1 Excavation	CY	800	\$55	\$ 44,000.00	sidewalk and curb removal, entire length
Concrete Median Barrier	LF	1,700	\$50.00	\$ 85,000.00	entire length, less 200' for curb cuts/entrance drives
4" White Waterborne Pavement Markings	LF	3,800	\$0.12	\$ 456.00	edge line at concrete median barrier (both sides), entire length
4" Yellow Waterborne Pavement Markings	LF	2,850	\$0.12	\$ 342.00	edge line at concrete median barrier and center yellow, entire length
Asphalt Paving - full depth, including stone base	SY	1,500	\$80.00	\$ 120,000.00	apprx. 1/2 of the ped-bikeway track width
Asphalt Paving - resurfacing	SY	1,500	\$14.50	\$ 21,750.00	apprx. 1/2 of the ped-bikeway track width
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	stop signs at curb cuts/driveways
Crosswalk Pavement Markings	EA	2	\$300.00	\$ 600.00	
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	bike route sign
White Hot Thermoplastic Legend (Arrows, Turn/Straight)	EA	8	\$150.00	\$ 1,200.00	apprx. 500' O.C.
Cement Concrete Sidewalk	SY	175	\$75.00	\$ 13,125.00	length below the West End Bridge
Cement Concrete Sidewalk Heavy Section	SY	40	\$100.00	\$ 4,000.00	at driveways (2)
Concrete Curb	LF	300	\$35.00	\$ 10,500.00	
Pack Lighting	EA	2	\$1,800.00	\$ 3,600.00	enhanced safety lighting beneath West End Bridge
Street Tree	EA	8	\$600.00	\$ 4,800.00	north side of proposed improvements; along bldg. frontage
Ornamental Plant	EA	120	\$50.00	\$ 6,000.00	north side of proposed improvements; along bldg. frontage
Relocation of Stairway Structure	EA	2	\$7,500.00	\$ 15,000.00	east and west staircases from West End Bridge to RT51 below
SUBTOTAL				\$ 334,293.00	

Maintenance and Protection of Traffic (2%)	\$ 6,685.86
Mobilization (8%)	\$ 26,743.44
Contingency (10%)	\$ 33,429.30
Engineering and Design (11%)	\$ 36,772.23

TOTAL \$ 437,923.83

Three Rivers Heritage Trail Connector

Opinion of Probable Costs

West End Bridge to Corliss Tunnel (City of Pittsburgh)

Prepared By: Mackin Engineering Company

11/8/2012

Segment length - 4,387 LF (.83 miles)

DESCRIPTION	UNIT	QTY	UNIT COST	SUBTOTAL	COMMENTS
Direct Main Alignment Route					
Pacific Pride Gas Station to Start Work Station of JMT RT51 Construction Project - 1,900 LF					
Clearing and Grubbing	AC	0.5	\$4,000	\$ 2,000.00	misc. material removal adjacent to proposed ped-bikeway track
Class 1 Excavation	CY	800	\$55	\$ 44,000.00	sidewalk and curb removal, entire length
Concrete Median Barrier	LF	1,700	\$50.00	\$ 85,000.00	entire length, less 200' for curb cuts/entrance drives
4" White Waterborne Pavement Markings	LF	3,800	\$0.12	\$ 456.00	edge line at concrete median barrier (both sides), entire length
4" Yellow Waterborne Pavement Markings	LF	2,850	\$0.12	\$ 342.00	edge line at concrete median barrier and center yellow, entire length
Asphalt Paving - full depth, including stone base	SY	1,500	\$80.00	\$ 120,000.00	apprx. 1/2 of the ped-bikeway track width
Asphalt Paving - resurfacing	SY	1,500	\$14.50	\$ 21,750.00	apprx. 1/2 of the ped-bikeway track width
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	bike route sign
White Hot Thermoplastic Legend (Arrows, Turn/Straight)	EA	8	\$150.00	\$ 1,200.00	apprx. 500' O.C.
Cement Concrete Sidewalk	SY	175	\$75.00	\$ 13,125.00	length below the West End Bridge
Pack Lighting	EA	2	\$1,800.00	\$ 3,600.00	enhanced safety lighting beneath West End Bridge
Street Tree	EA	8	\$600.00	\$ 4,800.00	north side of proposed improvements; along bldg. frontage
Ornamental Plant	EA	120	\$50.00	\$ 6,000.00	north side of proposed improvements; along bldg. frontage
Relocation of Stairway Structure	EA	2	\$10,000.00	\$ 20,000.00	east and west staircases from West End Bridge to RT51 below

SUBTOTAL \$ 323,233.00

Maintenance and Protection of Traffic (2%)	\$ 6,464.66
Mobilization (8%)	\$ 25,858.64
Contingency (10%)	\$ 32,323.30
Engineering and Design (11%)	\$ 35,555.63

TOTAL \$ 423,435.23

Three Rivers Heritage Trail Connector

Opinion of Probable Costs

Corliss Tunnel to McKees Rocks

Prepared By: Mackin Engineering Company

11/8/2012

Segment length - 5,754 LF (1.09 miles)

DESCRIPTION	UNIT	QTY	UNIT COST	SUBTOTAL	COMMENTS
Direct Main Alignment Route					
Pacific Pride Gas Station to Start Work Station of JMT RT51 Construction Project - 1,900 LF					
Clearing and Grubbing	AC	0.5	\$4,000	\$ 2,000.00	misc. material removal adjacent to proposed ped-bikeway track
Class 1 Excavation	CY	800	\$55	\$ 44,000.00	sidewalk and curb removal, entire length
Concrete Median Barrier	LF	1,700	\$50.00	\$ 85,000.00	entire length, less 200' for curb cuts/entrance drives
4" White Waterborne Pavement Markings	LF	1,900	\$0.12	\$ 228.00	edge line at concrete median barrier, entire length
4" Yellow Waterborne Pavement Markings	LF	2,850	\$0.12	\$ 342.00	edge line at concrete median barrier and center yellow, entire length
Asphalt Paving - full depth, including stone base	SY	2,100	\$80.00	\$ 168,000.00	apprx. 1/2 of the ped-bikeway track width
Asphalt Paving - resurfacing	SY	2,100	\$14.50	\$ 30,450.00	apprx. 1/2 of the ped-bikeway track width
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	bike route sign
White Hot Thermoplastic Legend (Arrows, Turn/Straight)	EA	8	\$150.00	\$ 1,200.00	apprx. 500' O.C.
Cement Concrete Sidewalk	SY	175	\$75.00	\$ 13,125.00	length below the West End Bridge
Pack Lighting	EA	2	\$1,800.00	\$ 3,600.00	enhanced safety lighting beneath West End Bridge
Street Tree	EA	8	\$600.00	\$ 4,800.00	north side of proposed improvements; along bldg. frontage
Ornamental Plant	EA	120	\$50.00	\$ 6,000.00	north side of proposed improvements; along bldg. frontage
Relocation of Stairway Structure	EA	2	\$7,500.00	\$ 15,000.00	east and west staircases from West End Bridge to RT51 below
SUBTOTAL \$				374,705.00	

Maintenance and Protection of Traffic (2%)	\$ 7,494.10
Mobilization (8%)	\$ 29,976.40
Contingency (10%)	\$ 37,470.50
Engineering and Design (11%)	\$ 41,217.55

TOTAL \$ 490,863.55

Three Rivers Heritage Trail Connector

Opinion of Probable Costs

West Carson Street, Stanhope Street, Linden Avenue, Chartiers Avenue to Island Avenue (all SR51) in McKees Rocks

Prepared By: Mackin Engineering Company

11/8/2012

Segment length - 2,557 LF (.48 miles)

DESCRIPTION	UNIT	QTY	UNIT COST	SUBTOTAL	COMMENTS
Direct Main Alignment Route					
Stanhope St. (to intersection of Linden and Furnace Ave.) - 1,300 LF					
Class 1 Excavation	CY	30	\$55	\$ 1,650.00	median island at Stanhope Street; 2' depth
4" Pavement Marking Removal	LF	3,100	\$0.80	\$ 2,480.00	apprx. 600 LF dashed lane lines and 2,500 LF yellow at median
4" White Waterborne Pavement Markings	LF	5,200	\$0.12	\$ 624.00	(2) lines each side of bike lane, entire length
4" Yellow Waterborne Pavement Markings	LF	150	\$0.12	\$ 18.00	
Asphalt Paving - full depth, including stone base	SY	45	\$80.00	\$ 3,600.00	at median island
Asphalt Paving - resurfacing	SY	450	\$14.50	\$ 6,525.00	removal of centerline rumble strips (snaps)
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	bike route sign
Bike Lane Symbol Marking, Bicycle and Arrow	EA	8	\$250.00	\$ 2,000.00	
Sharrow	EA	4	\$250.00	\$ 1,000.00	at Linden and Furnace intersection
Linden and Furnace Intersection (Eat-n-Park) to the Railroad Underpass at Island Ave., including Furnace Ave. - 1,000 LF					
<i>Along Chartiers Ave.</i>					
Post Mounted Sign, Type B (with post)	EA	3	\$240.00	\$ 720.00	bike route sign
Sharrow	EA	6	\$250.00	\$ 1,500.00	apprx. 200' O.C. along Chartiers Ave.
<i>Chartiers (at railroad underpass)</i>					
Concrete Curb Ramp	EA	1	\$800.00	\$ 800.00	westbound lane of Chartiers (at Locust)
Post Mounted Sign, Type B (with post)	EA	1	\$240.00	\$ 240.00	dismount and walk bike sign for sidewalk
<i>Chartiers to Locust (eastbound)</i>					
Post Mounted Sign, Type B (with post)	EA	2	\$240.00	\$ 480.00	bike route sign
Sharrow	EA	2	\$250.00	\$ 500.00	apprx. 200' O.C. along Locust
<i>Furnace St.</i>					
4" Pavement Marking Removal	LF	400	\$0.80	\$ 320.00	dashed lane lines
Pavement Marking Removal (Legends and Symbols)	EA	10	\$110.00	\$ 1,100.00	
4" White Waterborne Pavement Markings	LF	2,300	\$0.12	\$ 276.00	(2) lines each side of bike lane, entire length and dashed lane lines
Bike Lane Symbol Marking, Bicycle and Arrow	EA	4	\$250.00	\$ 1,000.00	
White Hot Thermoplastic Legend (Arrows, Turn/Straight)	EA	10	\$150.00	\$ 1,500.00	
Post Mounted Sign, Type B (with post)	EA	2	\$0.12	\$ 0.24	bike route sign
<i>Chartiers Crossing Shoppes</i>					
4" White Waterborne Pavement Markings	LF	2,300	\$0.12	\$ 276.00	(2) lines each side of bike lane, entire length and dashed lane lines
Bike Lane Symbol Marking, Bicycle and Arrow	EA	4	\$250.00	\$ 1,000.00	
Sharrow	EA	4	\$250.00	\$ 1,000.00	apprx. 200' O.C
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	bike route sign
				SUBTOTAL \$	30,529.24

Maintenance and Protection of Traffic (2%)	\$	610.58
Mobilization (8%)	\$	2,442.34
Contingency (10%)	\$	3,052.92
Engineering and Design (5%)	\$	1,526.46

TOTAL \$ 38,161.55

Three Rivers Heritage Trail Connector
Opinion of Probable Costs
McKees Rocks Bridge (SR51) to Tunnel Way in Stowe Township
 Prepared By: Mackin Engineering Company
 11/8/2012

Segment Length 1,777 LF (0.34 miles)

DESCRIPTION	UNIT	QTY	UNIT COST	SUBTOTAL	COMMENTS
Direct Main Alignment Route					
At McKees Rocks Bridge Intersection					
4" White Waterborne Pavement Markings	LF	1,200	\$0.12	\$ 144.00	(2) lines each side of bike lane, at McKees Rocks Bridge
Bike Lane Symbol Marking, Bicycle and Arrow	EA	6	\$250.00	\$ 1,500.00	
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	bike route sign
McKees Rocks Bridge to Tunnel Way					
Post Mounted Sign, Type B (with post)	EA	7	\$240.00	\$ 1,680.00	bike route and share the road sign
Sharrow	EA	16	\$250.00	\$ 4,000.00	apprx. 200' O.C.
SUBTOTAL \$				8,284.00	

Maintenance and Protection of Traffic (2%)	\$	165.68
Mobilization (8%)	\$	662.72
Contingency (10%)	\$	828.40
Engineering and Design (5%)	\$	414.20

TOTAL \$ 10,355.00

Three Rivers Heritage Trail Connector

Opinion of Probable Costs

Island Avenue (SR51) Stowe Township, Tunnel Way to Fleming Park Bridge

Prepared By: Mackin Engineering Company

11/8/2012

Segment Length 5,730 LF (1.09 miles)

DESCRIPTION	UNIT	QTY	UNIT COST	SUBTOTAL	COMMENTS
Direct Main Alignment Route					
Tunnel Way to Duke Street - 3,200 LF					
4" White Waterborne Pavement Markings	LF	6,400	\$0.12	\$ 768.00	outside lane edge lines, entire length
Sharrow	EA	16	\$250.00	\$ 4,000.00	apprx. 400' O.C.
Post Mounted Sign, Type B (with post)	EA	8	\$240.00	\$ 1,920.00	bike route sign
Duke Street to the Fleming Park Bridge - 2,500 LF					
4" Pavement Marking Removal	LF	10,000	\$0.80	\$ 8,000.00	apprx. 5,000 LF lane edge lines and 5,000 LF yellow at median
4" Yellow Waterborne Pavement Markings	LF	150	\$0.12	\$ 18.00	new double yellow center line
4" White Waterborne Pavement Markings	LF	7,500	\$0.12	\$ 900.00	(2) lines for eastbound bike lane, entire length and edge line westbound
Bike Lane Symbol Marking, Bicycle and Arrow	EA	6	\$250.00	\$ 1,500.00	
Sharrow	EA	14	\$250.00	\$ 3,500.00	apprx. 200' O.C.
Post Mounted Sign, Type B (with post)	EA	10	\$240.00	\$ 2,400.00	bike route and share the road sign
SUBTOTAL \$				23,006.00	

Maintenance and Protection of Traffic (2%)	\$	460.12
Mobilization (8%)	\$	1,840.48
Contingency (10%)	\$	2,300.60
Engineering and Design (5%)	\$	1,150.30

TOTAL \$ 28,757.50

Three Rivers Heritage Trail Connector

Opinion of Probable Costs

Neville Road along Neville Island

Prepared By: Mackin Engineering Company

11/8/2012

Segment Length 24,636 LF (4.67 miles)

DESCRIPTION	UNIT	QTY	UNIT COST	SUBTOTAL	COMMENTS
Direct Main Alignment Route					
Neville Road from the Fleming Park Bridge to 2nd Street - 2.70 MILE					
Asphalt Paving - resurfacing	SY	13000	\$15	\$ 188,500.00	apprx. 2.70 miles, bike lane each side of road
4" White Waterborne Pavement Markings	LF	31,000	\$0.12	\$ 3,720.00	outside lane edge line of bike lane, entire length (including eastbound at Neville Grand Split)
Bike Lane Symbol Marking, Bicycle and Arrow	EA	32	\$250.00	\$ 8,000.00	apprx. 1,000' O.C.
Post Mounted Sign, Type B (with post)	EA	12	\$240.00	\$ 2,880.00	bike route sign, apprx. 0.5 miles O.C.
2nd Street - 760 LF					
Sharrow	EA	2	\$250.00	\$ 500.00	(2) northbound on 2nd Street only
Post Mounted Sign, Type B (with post)	EA	2	\$240.00	\$ 480.00	bike route and share the road sign
Grand Avenue form 2nd Street to Neville Island Bridge - 1.5 MILE					
Sharrow	EA	80	\$250.00	\$ 20,000.00	apprx. 200' O.C
Post Mounted Sign, Type B (with post)	EA	31	\$240.00	\$ 7,440.00	bike route and share the road sign, after each cross-street intersection
				SUBTOTAL \$	231,520.00
Maintenance and Protection of Traffic (2%)				\$	4,630.40
Mobilization (8%)				\$	18,521.60
Contingency (10%)				\$	23,152.00
Engineering and Design (5%)				\$	11,576.00
				TOTAL \$	289,400.00

Three Rivers Heritage Trail Connector

Opinion of Probable Costs

State Route 51 Coraopolis

Prepared By: Mackin Engineering Company

11/8/2012

Segment Length 10,264 LF (1.94 miles)

DESCRIPTION	UNIT	QTY	UNIT COST	SUBTOTAL	COMMENTS
Direct Main Alignment Route					
Westbound SR51, Fourth Avenue - 5,141 LF					
Sharrow	EA	26	\$250.00	\$ 6,500.00	apprx. 200' O.C
Post Mounted Sign, Type B (with post)	EA	10	\$240.00	\$ 2,400.00	bike route and share the road sign, after each cross-street intersection
Eastbound SR51, Fifth Avenue - 5,123 LF					
Sharrow	EA	26	\$250.00	\$ 6,500.00	apprx. 200' O.C
Post Mounted Sign, Type B (with post)	EA	14	\$240.00	\$ 3,360.00	bike route and share the road sign, after each cross-street intersection
SUBTOTAL \$				18,760.00	
Maintenance and Protection of Traffic (2%)				\$ 375.20	
Mobilization (8%)				\$ 1,500.80	
Contingency (10%)				\$ 1,876.00	
Engineering and Design (5%)				\$ 938.00	
TOTAL \$				23,450.00	

Three Rivers Heritage Trail Connector

Opinion of Probable Costs

Montour Trail Connection

Prepared By: Mackin Engineering Company

11/8/2012

Segment Length - N/A

DESCRIPTION	UNIT	QTY	UNIT COST	SUBTOTAL	COMMENTS
Earthen Ramp and Trail to Montour Junction Sports Complex					
Clearing and Grubbing	AC	1	\$4,000.00	\$ 4,000.00	Earthen Ramp approximately 500 linear feet in length and 20-30' width; Ramp begins at grade and climbs approx. 30' height; includes benching. Assumes both on-site and off-site material for ramp construction.
Class 1 Excavation	CY	600	\$55.00	\$ 33,000.00	
Earthwork/Grading	CY	2,000	\$25.00	\$ 50,000.00	
Foreign Borrow Excavation, Fill Material	CY	5,000	\$30.00	\$ 150,000.00	
Toe of Slope Drainage Material, R-3 Rock	CY	600	\$90.00	\$ 54,000.00	Toe of slope drainage to tie into stormwater management plan of the Montour Junction Sports Complex
6" Pipe Underdrain and Backfill	LF	500	\$20.00	\$ 10,000.00	
Asphalt Paving - full depth, including stone base	SY	75	\$80.00	\$ 6,000.00	
Timber Fence	LF	500	\$45.00	\$ 22,500.00	
				SUBTOTAL \$	329,500.00

Maintenance and Protection of Traffic (2%)	\$	6,590.00
Mobilization (8%)	\$	26,360.00
Contingency (10%)	\$	32,950.00
Engineering and Design (11%)	\$	36,245.00
Erosion and Sedimentation Control (3%)	\$	9,885.00

TOTAL \$ 441,530.00

Three Rivers Heritage Trail Connector

Opinion of Probable Costs

Intersection Improvements

Prepared By: Mackin Engineering Company

11/8/2012

Segment Length - N/A

DESCRIPTION	UNIT	QTY	UNIT COST	SUBTOTAL	COMMENTS
1600 Gateway View Plaza Driveway					
LED Countdown Pedestal Signal Head, Type A	EA	2	\$550.00	\$ 1,100.00	
Pedestrian Push Button	EA	2	\$275.00	\$ 550.00	
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	
Sub-Total				\$ 2,610.00	
Chartiers Avenue at Furnace & Linden (Eat-n-Park)					
LED Countdown Pedestal Signal Head, Type A	EA	8	\$550.00	\$ 4,400.00	
Pedestrian Push Button	EA	2	\$275.00	\$ 550.00	
Concrete Curb Ramp	EA	2	\$800.00	\$ 1,600.00	
Cement Concrete Sidewalk	SY	14	\$75.00	\$ 1,050.00	(2) at 65 SF each
Pedestrian Stub Pole, Type A (Earth Mounted)	EA	1	\$1,300.00	\$ 1,300.00	
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	
Sub-Total				\$ 9,860.00	
Chartiers Avenue & Island Avenue (RR Overpass)					
LED Countdown Pedestal Signal Head, Type A	EA	4	\$550.00	\$ 2,200.00	
Pedestrian Push Button	EA	2	\$275.00	\$ 550.00	
24" White Hot Thermoplastic Pavement Markings	LF	100	\$11.50	\$ 1,150.00	
Concrete Curb Ramp	EA	4	\$800.00	\$ 3,200.00	
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	
Sub-Total				\$ 8,060.00	
McKees Rocks Bridge at SR 51					
Pedestrian Push Button	EA	2	\$275.00	\$ 550.00	
24" White Hot Thermoplastic Pavement Markings	LF	100	\$11.50	\$ 1,150.00	
Concrete Curb Ramp	EA	1	\$800.00	\$ 800.00	
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	
Sub-Total				\$ 3,460.00	
Fleming Park Bridge (west side on Island)					
LED Countdown Pedestal Signal Head, Type A	EA	2	\$550.00	\$ 1,100.00	
Pedestrian Push Button	EA	2	\$275.00	\$ 550.00	
24" White Hot Thermoplastic Pavement Markings	LF	150	\$11.50	\$ 1,725.00	
Concrete Curb Ramp	EA	1	\$800.00	\$ 800.00	
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	
Sub-Total				\$ 5,135.00	
Grand Avenue & Second (Neville Island)					
LED Countdown Pedestal Signal Head, Type A	EA	4	\$550.00	\$ 2,200.00	
Pedestrian Push Button	EA	4	\$275.00	\$ 1,100.00	
24" White Hot Thermoplastic Pavement Markings	LF	100	\$11.50	\$ 1,150.00	
Concrete Curb Ramp	EA	4	\$800.00	\$ 3,200.00	
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	
Sub-Total				\$ 8,610.00	
I-79 Bridge Ramp at Neville Island (Kings Restaurant and Fairfield Inn & Suites)					
LED Countdown Pedestal Signal Head, Type A	EA	4	\$550.00	\$ 2,200.00	
Pedestrian Push Button	EA	4	\$275.00	\$ 1,100.00	
24" White Hot Thermoplastic Pavement Markings	LF	50	\$11.50	\$ 575.00	
Concrete Curb Ramp	EA	4	\$800.00	\$ 3,200.00	
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	
Sub-Total				\$ 8,035.00	

DESCRIPTION	UNIT	QTY	UNIT COST	SUBTOTAL	COMMENTS
I-79 Bridge Ramp at Neville Island (Northbound On & Off Ramps)					
LED Countdown Pedestal Signal Head, Type A	EA	4	\$550.00	\$ 2,200.00	
Pedestrian Push Button	EA	4	\$275.00	\$ 1,100.00	
24" White Hot Thermoplastic Pavement Markings	LF	100	\$11.50	\$ 1,150.00	
Concrete Curb Ramp	EA	4	\$800.00	\$ 3,200.00	
Detectable Warning Surface	SF	16	\$35.00	\$ 560.00	
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	
Sub-Total				\$ 9,170.00	
Neville Bridge at Coraopolis					
LED Countdown Pedestal Signal Head, Type A	EA	6	\$550.00	\$ 3,300.00	
Pedestrian Push Button	EA	4	\$275.00	\$ 1,100.00	
24" White Hot Thermoplastic Pavement Markings	LF	200	\$11.50	\$ 2,300.00	
Concrete Curb Ramp	EA	3	\$800.00	\$ 2,400.00	
Pedestrian Stub Pole, Type A (Earth Mounted)	SF	4	\$1,300.00	\$ 5,200.00	
Post Mounted Sign, Type B (with post)	EA	4	\$240.00	\$ 960.00	
Sub-Total				\$ 15,260.00	
SUBTOTAL				\$ 70,200.00	
Maintenance and Protection of Traffic (2%)				\$ 1,404.00	
Mobilization (8%)				\$ 5,616.00	
Contingency (10%)				\$ 7,020.00	
Engineering and Design (11%)				\$ 7,722.00	
Erosion and Sedimentation Control (3%)				\$ 2,106.00	
TOTAL				\$ 94,068.00	