APPENDIX E. DETAILED COST ESTIMATES FOR PENNS AND BRUSH VALLEYS TRAILS

Penns Valley Rail Trail

Trail Segment: **Gregg Station (Rhoneymeade) to Smith Ln.**

Estimate of Construction Cost:	$	178,388.33
Cost per Mile:	$	103,904.07
Design Costs @ 20%	$	35,677.67
TOTAL	**$**	**214,065.99**
Total Cost per Mile	$	124,684.88

Note: Final Costs will be determined by Construction Drawings, Bidding, and Award of Contracts.

Trail Heads:

Gregg Station Rd - New Facility

Parking:

Gregg Station Rd - New Facility

Toilet Facilities:

Gregg Station Rd - New Facility

Alignment:

New trail follows abandoned L&T rail line through wooded land and between livestock pastured.

Trail width:

6' wide with 2' shoulders each side.

Trail Length:

New trail: 9065'	1.72 miles
TOTAL	1.72 miles

Associated Spurs and/or Trails:

Special Considerations:

Livestock fencing required both sides of trail. Screening required at residential properties.

Unit Cost Multipliers:

General Conditions	1.10	
Overhead and Profit	1.15	
Design Contingency	1.15	
TOTAL	1.45	

Estimate of Construction Cost: Based on Means 2007 Construction Cost Data

Item	*Quantity*	*Units*	*Unit Cost*	*Extension*	*Total with Multiplier*	*%*
TRAIL CONSTRUCTION						
Clearing and Grubbing	8265	lf trail	$ 2.27	$ 18,784.09	$ 27,326.16	15%
Trimming of Overstory/Veg	8265	lf trail	$ 0.76	$ 6,261.36	$ 9,108.72	5%
Excavation/Fill	2893	lf trail	$ 4.23	$ 12,235.28	$ 17,799.27	10%
Grading	2893	lf trail	$ 2.05	$ 5,929.63	$ 8,626.12	5%
Seeding	8265	lf trail	$ 0.50	$ 4,132.50	$ 6,011.75	3%
Granular Base - 10'	2893	lf trail	$ 10.28	$ 29,734.90	$ 43,256.85	24%
Granular Surfacing - 10'	2893	lf trail	$ 5.37	$ 15,532.73	$ 22,596.23	13%
Asphaltic Bituminous Paving	0	lf	$ 24.00	$ -	$ -	0%
Subtotal					$ 134,725.10	76%
DRAINAGE						0%
Drainage/Culvert - 15" Pipe	75	lf	$ 38.59	$ 2,894.25	$ 4,210.41	2%
Subtotal					$ 4,210.41	
FENCING						
Split Rail Fencing	0	lf	$ 13.40	$ -	$ -	0%
High Tensile Wire Fencing	8200	lf	$ 1.50	$ 12,300.00	$ 17,893.43	10%
Subtotal					$ 17,893.43	
BRIDGES						
100' pedestrian Bridge	0	lf	$ 688.00	$ -	$ -	0%
Subtotal					$ -	
TRAFFIC CONTROL/SIGNAGE						
Gates	4	ea	$ 900.00	$ 3,600.00	$ 5,237.10	3%
Bollards	0	ea	$ 650.00	$ -	$ -	0%
Traffic Signs	6	ea	$ 220.00	$ 1,320.00	$ 1,920.27	1%
Trail Emerg. ID Signs	17	ea	$ 100.00	$ 1,700.00	$ 2,473.08	1%
Crosswalk Striping	0	lf cross	$ 5.10	$ -	$ -	0%
Paved Crossings at Drives	0	sf	$ 2.40	$ -	$ -	0%
Subtotal					$ 9,630.45	5%

SUPPORT FACILITIES									0%
Unpaved Parking	2	space	$	600.00	$	1,200.00	$	1,745.70	1%
Paved HC Parking	1	space	$	1,000.00	$	1,000.00	$	1,454.75	1%
Porta John (reuse existing)									
HC Parking Painting/Striping	1	ea	$	200.00	$	200.00	$	290.95	0%
Subtotal							$	3,491.40	
AMENITIES									
Bicycle Racks	0	ea	$	660.00	$	-	$	-	0%
Benches	0	ea	$	990.00	$	-	$	-	0%
Landscaping (Screening)	1	allow	$	2,500.00	$	2,500.00	$	3,636.88	2%
Interpretive Signs	2	ea	$	1,200.00	$	2,400.00	$	3,491.40	2%
Trash Receptacles	2	ea	$	450.00	$	900.00	$	1,309.28	1%
Subtotal							$	8,437.55	5%
TOTAL							**$**	**178,388.33**	100%

Estimate of Construction Cost:	$	178,388.33
Cost per Mile:	$	103,904.07
Design Costs @ 15%	$	26,758.25
TOTAL	**$**	**205,146.57**
Total Cost per Mile	$	119,489.68
Trail Cost per Mile	**$**	**78,471.98**
Trail Cost - Lump Sum	$	134,725.10
Drainage	$	4,210.41
Fencing - Lump Sum	$	17,893.43
Bridge Cost - Lump Sum	$	-
Traffic Control - Lump Sum	$	9,630.45
Parking - Lump Sum	$	3,491.40
Amenities - Lump Sum	$	8,437.55
TOTAL	$	178,388.33

Penns Valley Rail Trail

Trail Segment: **Gregg School to Wildflower Lane, Spring Mills, PA**

Estimate of Construction Cost:	$	501,272.27
Cost per Mile:	$	308,835.19
Design Costs @ 20%	$	100,254.45
TOTAL	**$**	**601,526.72**
Total Cost per Mile	$	370,602.23

Note: Final Costs will be determined by Construction Drawings, Bidding, and Award of Contracts.

Trail Heads:

Old Gregg School - Existing Facility

Parking:

Old Gregg School - Existing Parking Facility/New Ballfield Parking

Toilet Facilities:

Old Gregg School - Existing Facility

Alignment:

New trail follows Sinking Creek Rd from Old Gregg School to ballfield, crosses over Sinking Creek and follows abandoned L&T rail line.

Trail width:

8' wide with 2' gravel shoulders each side.

Trail Length:

New trail: 8570'	1.62 miles
TOTAL	1.62 miles

Associated Spurs and/or Trails:

Special Considerations:

Unit Cost Multipliers:

General Conditions	1.10	
Overhead and Profit	1.15	
Design Contingency	1.15	
TOTAL	1.45	

Estimate of Construction Cost: Based on Means 2007 Construction Cost Data

Item	*Quantity*	*Units*	*Unit Cost*	*Extension*	*Total with Multiplier*	*%*
TRAIL CONSTRUCTION						
Clearing and Grubbing	8570	lf trail	$ 2.27	$ 19,477.27	$ 28,334.56	6%
Trimming of Overstory/Veg	8570	lf trail	$ 0.76	$ 6,492.42	$ 9,444.85	2%
Excavation/Fill	2142.5	lf trail	$ 4.23	$ 9,062.78	$ 13,184.07	3%
Grading	4285	lf trail	$ 2.05	$ 8,784.25	$ 12,778.89	3%
Seeding	8570	lf trail	$ 0.50	$ 4,285.00	$ 6,233.60	1%
Granular Base - 10'	0	lf trail	$ 10.28	$ -	$ -	0%
Granular Surfacing - 10'	8570	lf trail	$ 5.37	$ 46,020.90	$ 66,948.90	13%
Asphaltic Bituminous Paving	0	lf	$ 24.00	$ -	$ -	0%
Subtotal					$ 136,924.88	27%
DRAINAGE						
Drainage/Culvert - 15" Pipe	150	lf	$ 38.59	$ 5,788.50	$ 8,420.82	2%
Subtotal					$ 8,420.82	
FENCING						
Split Rail Fencing	100	lf	$ 13.40	$ 1,340.00	$ 1,949.37	0%
High Tensile Wire Fencing	0	lf	$ 5.00	$ -	$ -	0%
Subtotal					$ 1,949.37	
BRIDGES						
100' pedestrian Bridge	200	lf	$ 1,000.00	$ 200,000.00	$ 290,950.00	58%
New BridgeRailings	100	lf	$ 75.00	$ 7,500.00	$ 10,910.63	2%
Subtotal					$ 301,860.63	
TRAFFIC CONTROL/SIGNAGE						
Gates	0	ea	$ 900.00	$ -	$ -	0%
Bollards	24	ea	$ 650.00	$ 15,600.00	$ 22,694.10	5%
Traffic Signs	8	ea	$ 220.00	$ 1,760.00	$ 2,560.36	1%
Trail Emerg. ID Signs	16	ea	$ 100.00	$ 1,623.11	$ 2,361.21	0%
Crosswalk Striping	20	lf cross	$ 5.10	$ 102.00	$ 148.38	0%
Paved Crossings at Drives	200	sf	$ 2.40	$ 480.00	$ 698.28	0%
Subtotal					$ 28,462.34	6%

SUPPORT FACILITIES									
Unpaved Parking	6	space	$	600.00	$	3,600.00	$	5,237.10	1%
Paved HC Parking	1	space	$	1,000.00	$	1,000.00	$	1,454.75	0%
HC Parking Painting/Striping	1	ea	$	200.00	$	200.00	$	290.95	0%
Subtotal							$	6,982.80	
AMENITIES									
Bicycle Racks	1	ea	$	660.00	$	660.00	$	960.14	0%
Benches	0	ea	$	990.00	$	-	$	-	0%
Landscaping	1	allow	$	7,500.00	$	7,500.00	$	10,910.63	2%
Interpretive Signs	2	ea	$	1,200.00	$	2,400.00	$	3,491.40	1%
Trash Receptacles	2	ea	$	450.00	$	900.00	$	1,309.28	0%
Subtotal							$	16,671.44	3%
TOTAL							**$**	**501,272.27**	100%

Estimate of Construction Cost:	$	501,272.27
Cost per Mile:	$	308,835.19
Design Costs @ 15%	$	75,190.84
TOTAL	**$**	**576,463.11**
Total Cost per Mile	$	355,160.47
Trail Cost per Mile	**$**	**84,359.79**
Trail Cost - Lump Sum	$	136,924.88
Drainage	$	8,420.82
Fencing - Lump Sum	$	1,949.37
Bridge Cost - Lump Sum	$	301,860.63
Traffic Control - Lump Sum	$	28,462.34
Parking - Lump Sum	$	6,982.80
Amenities - Lump Sum	$	16,671.44
TOTAL	$	501,272.27

137000
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2000
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Penns Valley Rail Trail

Trail Segment: **Gregg School to Wildflower Lane, Spring Mills, PA**

Alternate Alignment at Myers Farm

Estimate of Construction Cost:	$	62,497.69
Cost per Mile:	$	194,110.48
Design Costs @ 20%	$	12,499.54
TOTAL	**$**	**74,997.23**
Total Cost per Mile	$	232,932.57

Note: Final Costs will be determined by Construction Drawings, Bidding, and Award of Contracts.

Trail Heads:

NA

Parking:

NA

Toilet Facilities:

NA

Alignment:

New trail dops to align along Sinking Creek Rdto remove trail from fam field. Ealigns with existing at end of field.

Trail width:

8' wide with 2' gravel shoulders each side.

Trail Length:

New trail: 1700'	0.32 miles
TOTAL	0.32 miles

Associated Spurs and/or Trails:

Special Considerations:

Unit Cost Multipliers:

General Conditions	1.10	
Overhead and Profit	1.15	
Design Contingency	1.15	
TOTAL	1.45	

Estimate of Construction Cost: Based on Means 2007 Construction Cost Data

Item	*Quantity*	*Units*	*Unit Cost*	*Extension*	*Total with Multiplier*	*%*
TRAIL CONSTRUCTION						
Clearing and Grubbing	400	lf trail	$ 2.27	$ 909.09	$ 1,322.50	2%
Trimming of Overstory/Veg	400	lf trail	$ 0.76	$ 303.03	$ 440.83	1%
Excavation/Fill	1700	lf trail	$ 4.23	$ 7,191.00	$ 10,461.11	17%
Grading	1700	lf trail	$ 2.05	$ 3,485.00	$ 5,069.80	8%
Seeding	1700	lf trail	$ 0.50	$ 850.00	$ 1,236.54	2%
Granular Base - 10'	1700	lf trail	$ 10.28	$ 17,476.00	$ 25,423.21	41%
Granular Surfacing - 10'	1700	lf trail	$ 5.37	$ 9,129.00	$ 13,280.41	21%
Asphaltic Bituminous Paving	0	lf	$ 24.00	$ -	$ -	0%
Subtotal					$ 57,234.41	92%
DRAINAGE						
Drainage/Culvert - 15" Pipe	0	lf	$ 38.59	$ -	$ -	0%
Subtotal					$ -	
FENCING						
Split Rail Fencing	270	lf	$ 13.40	$ 3,618.00	$ 5,263.29	8%
High Tensile Wire Fencing	0	lf	$ 5.00	$ -	$ -	0%
Subtotal					$ 5,263.29	
BRIDGES						
100' pedestrian Bridge	0	lf	$ 1,000.00	$ -	$ -	0%
New BridgeRailings	0	lf	$ 75.00	$ -	$ -	0%
Subtotal					$ -	
TRAFFIC CONTROL/SIGNAGE						
Gates	0	ea	$ 900.00	$ -	$ -	0%
Bollards	0	ea	$ 650.00	$ -	$ -	0%
Traffic Signs	0	ea	$ 220.00	$ -	$ -	0%
Trail Emerg. ID Signs	0	ea	$ 100.00	$ -	$ -	0%
Crosswalk Striping	0	lf cross	$ 5.10	$ -	$ -	0%
Paved Crossings at Drives	0	sf	$ 2.40	$ -	$ -	0%
Subtotal					$ -	0%

SUPPORT FACILITIES									
Unpaved Parking	0	space	$	600.00	$	-	$	-	0%
Paved HC Parking	0	space	$	1,000.00	$	-	$	-	0%
HC Parking Painting/Striping	0	ea	$	200.00	$	-	$	-	0%
Subtotal							$	-	
AMENITIES									
Bicycle Racks	0	ea	$	660.00	$	-	$	-	0%
Benches	0	ea	$	990.00	$	-	$	-	0%
Landscaping	0	allow	$	2,500.00	$	-	$	-	0%
Interpretive Signs	0	ea	$	1,200.00	$	-	$	-	0%
Trash Receptacles	0	ea	$	450.00	$	-	$	-	0%
Subtotal							$	-	0%
TOTAL							**$**	**62,497.69**	100%

Estimate of Construction Cost:	$	62,497.69
Cost per Mile:	$	194,110.48
Design Costs @ 15%	$	9,374.65
TOTAL	**$**	**71,872.34**
Total Cost per Mile	$	223,227.05
Trail Cost per Mile	**$**	**177,763.33**
Trail Cost - Lump Sum	$	57,234.41
Drainage	$	-
Fencing - Lump Sum	$	5,263.29
Bridge Cost - Lump Sum	$	-
Traffic Control - Lump Sum	$	-
Parking - Lump Sum	$	-
Amenities - Lump Sum	$	-
TOTAL	$	62,497.69