RIVERS OF STEEL

Economic Impact Assessment

The Annual Average Economic and Employment Impacts of Rivers of Steel on the Eight-County Region





Table of Contents

Executive Summary 1	
Introduction	2
Methodology	ł
Findings 6	3
Visitors and Visitor Spending6	3
Grantmaking7	7
Operations	3
Capital Expenses	3
Input-Output Economic Impact Model and Outputs	3
Conclusion10)
Appendix A: Rivers of Steel Programs 2016-201911	
Appendix B: Partner Organizations12	2

Tables

Table 1. Annual Average Visitor Count to Rivers of Steel and Partners	. 6
Table 2. Count by Visitor Type	. 6
Table 3. Spending Estimates by Visitor Type	. 7
Table 4. Spending by Visitors on Various Industries	. 7
Table 5. Annual Average Grantmaking by Rivers of Steel	. 7
Table 6. Annual Average Selected Operating Expenditures by Rivers of Steel	. 8
Table 7. Annual Average Capital Expenditures by Rivers of Steel	. 8
Table 8. Direct, Indirect, and Induced Economic Impact Estimates – Annual Averages	. 9
Table 9. Direct, Indirect, and Induced Employment Impact Estimates – Annual Averages	. 9

This economic impact assessment was developed by The Hill Group, Inc. in partnership with Rivers of Steel Heritage Corporation.

© Rivers of Steel Heritage Corporation, 2020

Executive Summary

The Rivers of Steel National Heritage Area was created in 1996 by an Act of Congress, and by the Commonwealth of Pennsylvania, to celebrate southwestern Pennsylvania's industrial history, the landscape that fueled it, and the hardworking men and women who made it possible. Since that time, the organization has worked tirelessly and creatively to offer experiences, attractions, and programs that highlight the region's heritage. In fact, more than 25,000 individuals each year visit Rivers of Steel's sites, including National Historic Landmarks, or participate in its programs, including arts, education, and more. Rivers of Steel is a partner to many peer organizations throughout southwestern Pennsylvania, and together they work collectively to draw hundreds of thousands more.

An increased appreciation for history and heritage is not the only impact that Rivers of Steel has on the region. The visitors it attracts and the dollars it invests in southwestern Pennsylvania ripple throughout the eight-county region in the form of increased revenue for businesses, income and jobs for residents, and tax revenue. In 2013, an initial economic impact study examining the period of 1996-2012 was conducted by the National Park Service for Rivers of Steel. The following economic impact assessment serves as a fresh assessment of annual average impact incorporating the evolution of experiences, attractions, programs, and partnerships developed through 2019.

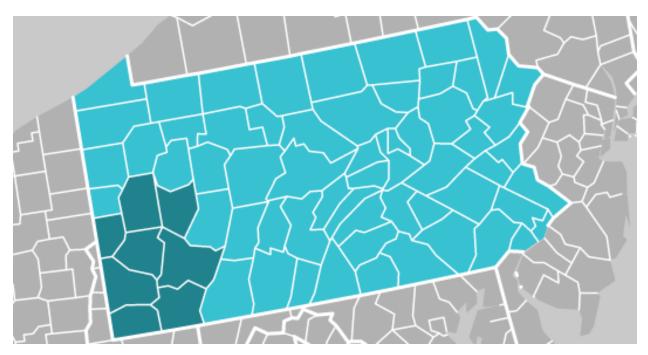
For this study, an input-output economic impact model using the IMPLAN data modeling application was created by estimating spending in the regional economy by visitors to Rivers of Steel and visitors to close partner organizations plus Rivers of Steel's annual average expenditures for various operations and capital improvements. IMPLAN uses geography-specific industry spending patterns to estimate direct, indirect, and induced economic and employment impacts of these activities on the eight-county southwestern Pennsylvania region.

Rivers of Steel took a conservative approach to this study, careful not to present figures that may be difficult to defend or justify. This is not an assessment of the impacts of all history and heritage activities in the eight-county region. Instead, it is an estimate of the economic impacts of history and heritage activities that are within the span of control or influence of Rivers of Steel Heritage Corporation. The economic impact results presented in this report are annual averages, not cumulative impacts for Rivers of Steel's quarter-century of activity.

This economic impact assessment estimates the activities of Rivers of Steel support the generation of more than \$92 million of economic benefit and 922 jobs each year. This report illustrates a significant return on investment of funds provided by National Park Service, the Commonwealth of Pennsylvania, private foundations, and corporate sponsors and demonstrates that, in addition to showcasing the rich history of southwestern Pennsylvania, Rivers of Steel is reinvesting in the communities of southwestern Pennsylvania and helping to forge a bright future for all who live in and visit the region.

Introduction

Rivers of Steel Heritage Corporation and the Rivers of Steel National Heritage Area¹ were created nearly 25 years ago to celebrate southwestern Pennsylvania's industrial history, the landscape that fueled it, and the hardworking men and women who made it possible. Over this quarter-century, Rivers of Steel has linked communities with a shared cultural and industrial heritage through dynamic initiatives and transformative experiences that showcase the artistry and innovation of the past, present, and future.



Rivers of Steel National Heritage Area Eight-County Region

Today, Rivers of Steel operates a portfolio of historically-significant sites and offers public experiences, attractions, and programs that highlight the region's industrial prowess. The organization provides heritage tours of important landmarks and helps to draw out-of-town visitors to partner sites and locations. Workshops offer immersive experiences of the region's legacy of innovation and industrial might. Pop-up and permanent exhibitions showcase artistry at Rivers of Steel sites and throughout partner organizations across southwestern Pennsylvania. Festivals and annual extravaganzas attract thousands of visitors to celebrate creative connections and unique cultural heritage.

Recently, the organization invested significantly to preserve physical spaces of historical importance. The Carrie Blast Furnaces, now considered a National Historic Landmark, towers 92 feet above the Monongahela River as an increasingly-rare example of pre-World War II iron-making technology. Explorer, the world's first LEED-constructed commercial passenger marine vessel, is a STEM education boat – the culmination of Rivers of Steel's long-standing goal of connecting the region's waterways to history – that offers unparalleled opportunities to

¹ Covering eight counties in southwestern Pennsylvania: Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Washington, and Westmoreland.

experience the beauty of Pittsburgh and southwestern Pennsylvania from its rivers that once served as critical arteries for the steel industry. The Bost Building, another National Historic Landmark, is a visitors' center and gateway to the National Heritage Area. The Pump House and Water Tower, historic structures from the former U.S. Steel Homestead Works and the site of the infamous 1892 Homestead Lockout and Strike, have been saved and restored. Another facility, the W.A. Young & Sons Foundry and Machine Shop, which operated from 1900 to 1965, produced parts for steamboats, coal mines, and railroads that were essential infrastructure for the region's industries. Today, the Machine Shop is also a National Historic Landmark.

Through these sites and many more in communities across the region, Rivers of Steel connects the masses to arts, education, preservation, and heritage in unparalleled ways that are enjoyed by patrons who call our region home and visitors who come from every corner of the globe.

Selected Experiences, Attractions, and Programs at Rivers of Steel Sites



Student scientists on the Explorer Riverboat



Photography exhibition at the Bost Building



Open house at W.A. Young & Sons Foundry and Machine Shop



Patrons and exhibitors at the Festival of Combustion



Professional development for educators at Carrie Furnaces



Iron pour demonstration during Thrival Festival at Carrie Furnaces

The immediate and tangible impact of this work is, of course, the preservation and celebration history and heritage. Simultaneously, however, the work of Rivers of Steel stimulates and revitalizes the regional economy. More than 25,000 individuals visit Rivers of Steel experiences, attractions, and programs annually. Hundreds of thousands more visit the region to enjoy programs offered by close partner organizations who collaborate with Rivers of Steel in a variety of ways to showcase the region.

Together, these visitors invest millions of dollars in southwestern Pennsylvania that ripple through the eight-county region in the form of increased revenue for businesses, income and jobs for residents, and taxes for municipal, county, and state governments. This multiplier effect was first quantified for Rivers of Steel in 2013, and the following economic impact assessment serves as a fresh assessment of impact incorporating the evolution of experiences, attractions, programs, and partnerships forged over the past seven years.

Methodology

This economic impact study for Rivers of Steel National Heritage Area uses input-output analysis to assess the impact that activities by Rivers of Steel sites and partner organizations have on the eight-county region of the National Heritage Area. Input-output economic impact modeling calculates the direct, indirect, and induced impacts on a regional economy based on activities of the organization and, consequently, how those activities lead to ripple effects throughout the region.

In this study, activities used as model inputs include:

- Visitors to Rivers of Steel events, exhibitions, and sites
- Visitors to key partner organizations throughout the eight-county region with whom Rivers of Steel has had an influential relationship or collaborative programming
- Estimates of visitor spending in the regional economy
- Grant funding provided by Rivers of Steel to many organizations throughout the region as part of its historical commitment to facilitate community and economic revitalization
- Operations of Rivers of Steel including employee compensation and the organization's spending in the local economy
- Capital expenses by Rivers of Steel at various sites and facilities

Within the input-output model built with the IMPLAN data modeling application, these inputs cascade throughout the regional economy and their effects are multiplied:

- When a visitor to Rivers of Steel or a partner organization spends money on food, gasoline, lodging, or other items, that spending translates to income for the businesses providing those goods or services direct impacts.
- When those businesses and organizations purchase needed supplies from other business and organizations to serve those customers, that spending becomes revenue for them indirect impacts.
- When owners or employees of all these businesses spend their incomes throughout the regional economy, that spending becomes income for others throughout the region induced impacts.

The IMPLAN data modeling application calculates these direct, indirect, and induced impacts that are realized within the eight-county region. By attracting visitors through high-demand programming, providing grant funding to peers, and spending on its own operations and improvements, Rivers of Steel generates spending that has a significant multiplier effect throughout southwestern Pennsylvania.

Data for inputs in this model were collected through primary and secondary research:

• Visitors to Rivers of Steel were calculated by reviewing visitation reports, ticket sales, and rental agreements for 2017, 2018, and 2019 and conducting interviews with Rivers of Steel staff members. Visitors to key partner organizations were determined through interviews with executives at those organizations based on their internal estimates of visitation for either 2016 through 2018 or 2017 through 2019 depending upon data availability at the time of the interviews. Recognizing that Rivers of Steel does not influence 100 percent of partner programs nor 100 percent of visitors to partner

organizations, this economic impact model assumes that slightly more than one-third of visitors to partner organizations in a given year may be attributable to either support from or a long-standing relationship with Rivers of Steel or the promotion of the region by Rivers of Steel and its partners.

- Amounts and types of spending by these visitors is estimated using data provided by the National Park Service, mirroring methodology used in many previous economic impact assessments for National Heritage Areas.
- Grant funding by Rivers of Steel to peer organizations throughout the region is tracked regularly. For this study, grants awarded in 2016, 2017, and 2018 are used as inputs.
- Operations of Rivers of Steel, including employee compensation, are calculated using actual expenditures from 2016, 2017, and 2018 including what the organization expends on audit and legal services, consultants, insurance, utilities, maintenance of facilities and equipment, supplies, marketing services, and more.
- Capital expenditures of Rivers of Steel come directly from organizational budgets for 2016, 2017, and 2018.

For all inputs – visitors, grants, operational expenditures, and capital expenditures – annual averages are calculated using the three most-recent years for which data is available. Annual averages help to smooth peaks and valleys in data, reducing variations and creating a more conservative model.

Once annual averages are calculated, these data inputs are loaded into the IMPLAN data modeling application through which – after model design, development, and execution – direct, indirect, and induced economic output, taxes, and jobs are estimated.

It is important to note the limitations of this methodology and of interpreting its results. The preceding methodology is time-tested and mirrors many previous economic impact studies for National Heritage Areas. However, all economic impact modeling is based on estimates and assumptions. In this study, significant efforts were deployed to be conservative with estimates of visitors and focus only on activities that are attributable to the work of Rivers of Steel. This is not an assessment of the impacts of all history and heritage activities in the eight-county region. Instead, it is an estimate of the economic impacts of history and heritage activities that are within the span of control or influence of Rivers of Steel Heritage Corporation. The economic impact results presented in this report are annual averages, not cumulative impacts for Rivers of Steel's quarter-century of activity.

Findings

Inputs for this economic impact assessment include visitor spending and select expenditures by Rivers of Steel. Outputs include direct, indirect, and induced economic output, jobs supported, and tax revenues. Inputs and outputs are detailed in this section.

Visitors and Visitor Spending

More than 25,000 individuals visit Rivers of Steel sites each year to participate in more than 50 experiences, attractions, and programs (see Appendix A for a detailed list). More than one million individuals visit sites and programs operated by close partners throughout the region who have significant ties to Rivers of Steel and to the history and heritage they collectively showcase (see Appendix B for a detailed list). A portion of visitors to partner sites, approximately 37 percent for this impact assessment, may be attributable to either support from or a long-standing relationship with Rivers of Steel or the joint promotion of the region. Together with its close partners, this assessment estimates that Rivers of Steel influences or helps to attract more than 400,000 visitors to the region on average each year.

Table 1. Annual Average Visitor Count to Rivers of Steel and Partners

Visitor Source	Annual Average Visitor Count
Visitors directly to Rivers of Steel sites and	25,552
programs	
Subset of Visitors to Partner Organizations	376,582
Total Visitors for this study	402,134

According to the National Park Service,² of visitors to sites like National Parks and National Heritage Areas, approximately 21 percent are local day-trip visitors who originate in the region and visit a site or sites and return home the same day, 36 percent are non-local day trip visitors who originate outside of the region and return home the same day, and 43 percent are overnight visitors who originate from outside the region and spend a night in various types of lodging.

Table 2. Count by Visitor Type

Visitor Type	Percentage of Total Visitors	Visitor Type Count
Local Day Visitor	21 percent	84,448
Non-Local Day Visitor	36 percent	144,768
Overnight Visitor	43 percent	172,917
Total Visitors	100 percent	402,134

The same National Park Service study indicates that, on average, local day trip visitors spend nearly \$38, non-local day trip visitors spend nearly \$66, and overnight visitors spend about \$257 on goods and services like lodging or camping, restaurants, recreation, transportation and

² Cullinane Thomas, C., Koontz, L & Cornachione, E. 2019. 2018 National Park Visitor Spending Effects. Natural Resource Report NPS/NRSS/EQD/NRR-2019/1922. National Park Service.

gasoline, groceries, and retail goods. Using National Park Service estimates of visitor types and spending by visitor types and combining them with Rivers of Steel and partner visitors, it is possible to develop estimates of spending by individuals who visit the region as a result of the efforts of Rivers of Steel and its close partner organizations.

Table 3. Spending Estimates by Visitor Type

Visitor Type	Spending Per Visitor	Total Spending by Type
Local Day Visitors	\$37.67	\$3,181,158.47
Non-Local Day Visitors	\$65.54	\$9,488,101.60
Overnight Visitors	\$257.32	\$44,495,120.49

According to National Park Service research, this spending is allocated across various industries depending upon visitor type, totaling more than \$57 million annually.

Table 4. Spending by Visitors on Various Industries

Industry	Spending by Visitors
Lodging	\$15,007,866.60
Restaurants	\$12,020,429.44
Recreation	\$6,216,337.81
Transportation	\$5,140,457.41
Retail	\$5,876,586.10
Camping	\$1,912,816.21
Groceries	\$4,460,954.00
Gasoline	\$6,527,776.87
Total	\$57,163,224.42

These estimates of visitors and their spending patterns are used as inputs for the input-output economic impact model that is designed and developed using the IMPLAN data modeling application. The direct, indirect, and induced impacts of visitor spending area provided in Table 8 along with the impacts of other activities.

Grantmaking

Rivers of Steel has a long history of grantmaking to peer organizations throughout the eightcounty region to support collaborative projects that amplify history and heritage. Between 2016 and 2018, more than \$71,000 per year on average was awarded by Rivers of Steel. This is an additional input for the economic impact model.

Table 5. Annual Average Grantmaking by Rivers of Steel

	Annual Average
Grants to Peer Organizations	\$71,466.50

Operations

The annual operating budget of Rivers of Steel is approximately \$2.5 million. A subset of these expenditures is allocated to employee compensation and goods and services purchased by Rivers of Steel from vendors within the region, and this spending has a multiplier effect on the region. Expenses for employee compensation, audit and legal services, consultants, insurance, utilities, maintenance of facilities and equipment, supplies, marketing services, and more are used as inputs for the economic impact model.

Table 6. Annual Average Selected Operating Expenditures by Rivers of Steel

	Annual Average
Selected Operating Expenditures	\$1,976,288.98

Capital Expenses

Throughout its 25-year history and especially over the past seven years, Rivers of Steel has invested in its built environment, creating or renovating historic sites, National Historic Landmarks, and various facilities under its control. On average, Rivers of Steel spends approximately \$176,000 on construction each year which is as an input for the economic impact model.

Table 7. Annual Average Capital Expenditures by Rivers of Steel

	Annual Average
Capital/Construction Expenditures	\$176,130.12

Input-Output Economic Impact Model and Outputs

Estimates of annual average spending by visitors and annual averages of actual spending by Rivers of Steel on grants, operations, and capital improvements are inputs for the IMPLAN data modeling application. Mirroring the methodology used for many previous economic impact studies of National Heritage Areas, these spending figures are applied to industry sectors in IMPLAN. Spending patterns developed by IMPLAN for each industry sector that are unique to the eight-county region are used within the input-output model to quantify direct, indirect, and induced impacts on economic output, jobs, and tax revenues.

Direct impacts are realized when a visitor to Rivers of Steel or a partner organization spends money on food, gasoline, lodging, or other items and that spending translates to income for the businesses providing those goods or services. Indirect impacts are realized when those businesses and organizations purchase needed supplies from other business and organizations to serve those customers and that spending becomes revenue for them. Induced impacts are realized when owners or employees of all these businesses spend their incomes throughout the regional economy and that spending becomes income for others throughout the region. Taken together, the direct, indirect, and induced impacts quantify the ripple effect of Rivers of Steel. As Table 8 indicates, Rivers of Steel helps to provide more than \$92 million of total economic impact for the eight-county region annually because of the ripple effect of its activities. Of this, more than \$10 million of annual impact results from new sites and evolved programming that has been envisioned and realized by Rivers of Steel since 2013 – evidence of the organization's significant progress in the past seven years since its impact was last studied by the National Park Service.

Source	Direct	Indirect	Induced	Total
Rivers of Steel	\$2,958,216.18	\$1,100,011.21	\$1,471,427.53	\$5,529,654.92
Visitor Spending				
Partner Visitor	\$43,597,755.99	\$16,211,803.87	\$21,685,683.05	\$81,495,242.91
Spending				
Rivers of Steel	\$1,976,288.98	\$1,011,802.85	\$1,217,490.06	\$4,205,581.89
Compensation				
and Operations				
Rivers of Steel	\$183,135.74	\$52,910.47	\$92,537.73	\$328,583.94
Capital				
Expenses				
Rivers of Steel	\$313,983.52	\$103,966.00	\$97,621.57	\$515,571.09
Grants Awarded				
Total	\$49,029,380.42	\$18,480,494.40	\$24,564,759.93	\$92,074,634.75

Table 8. Direct, Indirect, and Induced Economic Impact Estimates – Annual Averages

Importantly, all this activity is estimated to support more than 922 jobs within the eight-county region, which is significant for the quality of life of those employees and those who rely on them.

Table 9. Direct, Indirect, and Induced Employment Impact Estimates - Annual Averages

Source	Direct	Indirect	Induced	Total
Rivers of Steel	40.44	6.08	9.54	56.06
Visitor Spending				
Partner Visitor	596.04	89.54	140.60	826.18
Spending				
Rivers of Steel	21.90	5.33	7.89	35.12
Compensation				
and Operations				
Rivers of Steel	1.32	0.24	0.60	2.16
Capital				
Expenses				
Rivers of Steel	1.24	0.70	0.63	2.57
Grants Awarded				
Total	660.94	101.88	159.27	922.09

In addition, all these activities and the resulting ripple effect in the economy generate significant estimated tax revenue for municipal, county, and state governments totaling more than \$5.6 million and for the federal government of more than \$7.4 million.

Conclusion

For nearly a quarter-century, Rivers of Steel Heritage Corporation through the Rivers of Steel National Heritage Area has worked tirelessly to preserve and celebrate southwestern Pennsylvania's industrial and cultural heritage. Its experiences, attractions, and programs draw tens-of-thousands of visitors each year, and it works closely with partner organizations to draw hundreds of thousands more. The immediate effect of this work is a greater appreciation for the region's treasured past, but Rivers of Steel also impacts the region's present and future through significant economic and employment benefits that result from its work.

This economic impact assessment estimates the generation of more than \$92 million of economic benefit and 922 jobs each year as a result of spending by visitors to Rivers of Steel and its partners plus the expenditures of Rivers of Steel on grantmaking, operations, and capital improvements. A portion of this economic impact is associated with new sites and evolved programming at Rivers of Steel itself that has been developed in the seven years since its impact was last studied by the National Park Service.

This total economic benefit also represents a significant return on investment for its key funding partners. Annual investment of \$664,000 by the National Park Service and an average investment of \$200,000 by the Pennsylvania Heritage Parks Program multiply more than 100-fold in terms of ultimate economic benefit for the eight-county region. Generous foundation support of approximately \$1 million per year enables economic impact of 90-times that amount through the work of Rivers of Steel and its partner organizations.

Rivers of Steel and its funding partners can be confident that the organization's dedication to mission, ingenuity in programming, and culture of regional partnerships will prevail as they collectively plan for the next 25 years and beyond. The organization will continue to showcase southwestern Pennsylvania's unique history while helping forge a bright future for all who live in and visit our region.

Appendix A: Rivers of Steel Programs 2016-2019

The following programs and activities were offered by Rivers of Steel in 2016, 2017, 2018, and/or 2019. Visitor counts or ticket sales figures were used to estimate total visitors to Rivers of Steel.

- 1. Alloy PGH 2018 Opening
- 2. Alloy PGH Artist Led Ex Tours
- 3. Aluminum Casting Session
- 4. Arts Workshops and Events
- 5. Babushkas and Hard Hats
- 6. Bost Building Visitors
- 7. Bost-Pump House Tours
- 8. Breaking Ground Exhibition
- 9. Carrie Arts and Grounds
- 10. Carrie Blast Furnaces Guided Tour
- 11. Carrie Furnaces and Explorer Tours
- 12. Carrie Furnaces Taster Tour
- 13. Carrie Industrial Tour
- 14. Carrie Iron Garden
- 15. Carrie Photo Safari
- 16. Carrie Private Tours
- 17. Cast Iron with Dad
- 18. Casting Workshops
- 19. Carrie Furnaces Mini Tour Shakedown Beers
- 20. Explorer Photo Safari
- 21. Explorer STEM
- 22. Explorer Twilight Soiree
- 23. Facilitating Dialogue Programs
- 24. Facility Rentals and Events
- 25. Festival of Combustion
- 26. Foundry 1 Intro to Iron
- 27. Graffiti Workshops
- 28. Happy Hour with Carrie
- 29. Heritage Workshops
- 30. Homestead First Fridays

- 31. Iron Garden
- 32. Iron Imagery
- 33. Kids at Carrie
- 34. Off Camera Flash at Furnace
- 35. PGH 101 Tours
- 36. Photo Safari at Carrie Furnaces
- 37. Photography and Television and Movie Filming
- 38. Post Industrial Arts and Grounds Carrie Tour
- 39. Post-Gazette Safari
- 40. Private Metal Taster Workshop
- 41. Receptive Tours
- 42. River Ecology Adventure at the Point
- 43. River Separates Water Artist Led Cruise
- 44. Rust Belt Brunch Cruise
- 45. Rustbelt Coalition Carrie Furnaces Tour
- 46. Steel Specters
- 47. Steel to Sustainable Festival
- 48. Sunday Art Sessions
- 49. Sunset on the Mon Photo Safari
- 50. Three-Hour Metal Tasters
- 51. Thrival Festival
- 52. Traveling Trunk
- 53. Urban Art Tour
- 54. Urban Art Tour at Carrie Furnaces
- 55. Urban Art Workshops
- 56. WA Young Tour
- 57. Weeklong Iron Intensives

Appendix B: Partner Organizations

The following organizations were selected from among many partners by Rivers of Steel for inclusion in this economic impact assessment. These organizations are long-standing partners of Rivers of Steel working collectively to preserve and promote southwestern Pennsylvania. Visitor counts for the three most recent years were provided by executives of each organization, and a portion of these visitors was included in the input-output economic impact model.

Rivers of Steel thanks each organization for individual and collaborative efforts to attract visitors and improve quality of life in southwestern Pennsylvania.

Carnegie Science Center 1 Allegheny Ave Pittsburgh, PA 15212 http://www.carnegiesciencecenter.org/

The Frick Pittsburgh – Clayton 7227 Reynolds St. Pittsburgh, PA 15208 <u>https://www.thefrickpittsburgh.org/clayton</u>

Great Allegheny Passage Allegheny Trail Alliance 1705 Maple Ave., Suite 228 Homestead, PA 15120 https://gaptrail.org/about-us

Pennsylvania Trolley Museum 1 Museum Road Washington, PA 15301 https://pa-trolley.org/

Senator John Heinz History Center 1212 Smallman St. Pittsburgh, PA 15222 https://www.heinzhistorycenter.org/

The Westmoreland Museum of American Art 221 N Main St. Greensburg, PA 15601 https://thewestmoreland.org/

