



# Foundation Document Overview

## Allegheny Portage Railroad National Historic Site

Pennsylvania



### Contact Information

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## Purpose



*ALLEGHENY PORTAGE RAILROAD NATIONAL HISTORIC SITE preserves the history and remnants of the Allegheny Portage Railroad and interprets the Pennsylvania Mainline Canal's system of canals, railroads, and inclined planes and the impact these had on the early development of the nation.*



## Significance

Significance statements express why Allegheny Portage Railroad National Historic Site resources and values are important enough to merit national park unit designation. Statements of significance describe why an area is important within a global, national, regional, and systemwide context. These statements are linked to the purpose of the park unit, and are supported by data, research, and consensus. Significance statements describe the distinctive nature of the park and inform management decisions, focusing efforts on preserving and protecting the most important resources and values of the park unit.

- The challenges presented by the terrain in the Allegheny Mountains led to a number of transportation and engineering innovations that advanced industrial development in the United States, including wire rope, containerized cargo, mechanized inclined planes, locomotive technology, steam engines, and tunnel construction.
- The Staple Bend Tunnel was the first railroad tunnel in the United States.
- Rising more than 1,400 feet and stretching for 36 miles, the Allegheny Portage Railroad was the first and largest system of inclined planes and levels in the United States.
- John Roebling solved the technical dilemmas associated with the Allegheny Portage Railroad's use of hemp rope to raise rail cars and canal boats by inventing wire rope. Wire rope later allowed internationally significant advancements in a variety of industrial fields, including bridge building, mining, and elevators.
- Completed in 1840 at a cost of \$12 million (\$280 million in 2012<sup>1</sup> dollars), the Pennsylvania Mainline Canal was the largest, most complex, and costliest single public works project in the United States.
- The Allegheny Portage Railroad and Pennsylvania Mainline Canal shaped patterns of regional economic and social development and were catalysts for industrial development in western Pennsylvania.
- The Allegheny Portage Railroad conquered the Allegheny Mountains, established a major transportation corridor across Pennsylvania, and paved the way for the iconic Pennsylvania Railroad and westward expansion.

1. Source: Handbook of Labor Statistics, U.S. Department of Labor, [http://www.minneapolisfed.org/community\\_education/teacher/calc/hist1800.cfm](http://www.minneapolisfed.org/community_education/teacher/calc/hist1800.cfm)



## Fundamental Resources and Values

Fundamental resources and values are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to merit primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance.

- **Staple Bend Tunnel.** The first railroad tunnel in the United States; it is 901 feet long with 150 feet of cut stone lining on both ends. The west entrance retains its Romanesque Revival façade.
- **The historic archeological foundation of Engine House 6.** The only viewable engine house foundation in the park unit, currently protected by Exhibit Shelter 6. The shelter includes a full-scale interpretive display of machinery used to raise and lower rail cars and canal boats on the incline.
- **Lemon House.** A stone structure at the head of Incline 6. The house was operated as a tavern by Sam and Jean Lemon to serve travelers and workers on the Allegheny Portage Railroad.
- **Skew Arch Bridge.** A 60-foot-long stone bridge that was constructed by hand and without mortar to carry the Huntingdon-Cambria-Indiana Turnpike over Incline 6 at an obtuse angle. The bridge builders made use of a rare form of masonry to accommodate the angle of the turnpike as it intersected with the portage.
- **The portage trace.** Remnants of sleepers, culverts, and inclined planes and levels, as well as historic archeological remnants of the other engine houses and supporting structures.
- **Opportunity to understand and appreciate early American engineering accomplishments.** Engineering feats and innovations used to raise and lower railcars and canal boats over 36 miles and 1,400 feet that were marvels in their time because of their scale and precision.



- **Sense of discovery.** Forests and hills surrounding many of the resources associated with the portage that still exemplify the remote and rugged nature of the Allegheny Mountains in the early 19th century. The juxtaposition of human accomplishment within a rugged natural setting gives the visitor a sense of discovery and is important for providing a context for the incredible challenges that were overcome during the construction and operation of the portage railroad.
- **Allegheny Portage Railroad museum collection.** Books, articles, photographs, archeological, and architectural objects related to the Allegheny Portage Railroad component of the Pennsylvania Mainline Canal, and transportation in the region.

## Other Important Resources & Values

Allegheny Portage Railroad National Historic Site may contain other resources and values that may not be fundamental to the purpose and significance of the park, but are important to consider in management and planning decisions. These are referred to as other important resources and values.

- **The 6 to 10 Trail system.** Multiuse trail system that follows the remnants of the old portage and new portage trace on the eastern slope of the Allegheny Mountains. The trail follows the original portage in some sections and contains newly constructed sections where the portage was replaced by development.
- **Path of the Flood Trail.** Multiuse trail that runs from Franklin to Ehrenfeld and is a combination of the old portage trace and Southern Cambria trolley line. The Staple Bend Tunnel Trail is an important segment of the Path of the Flood Trail.
- **The new portage trace.** A section that includes modern grading and engineering techniques as an advanced alternative to the system of inclines and levels. Most of the trace within the park includes the 6 to 10 Trail.
- **Other historic features that illustrate the role of the Allegheny Portage Railroad and the Pennsylvania Canal in the nation's history.** Historic remnants related to transportation, engineering, and commerce within the Allegheny Portage Railroad corridor include coal mines, manufacturing plants, mills, roads, and trails.

## Interpretive Themes

Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park—they define the most important ideas or concepts communicated to visitors about a park unit. Themes are derived from, and should reflect, park purpose, significance, resources, and values. The set of interpretive themes is complete when it provides the structure necessary for park staff to develop opportunities for visitors to explore and relate to all of the park significances and fundamental resources and values.

- During the Industrial Revolution, an explosion of ideas and technology led to the creation of the Mainline Canal and fueled economic growth.
- The Mainline Canal facilitated new opportunities and experiences and embodied new ideas that changed lives.
- The natural landscape of Pennsylvania challenged planners to find innovative solutions to overcome natural obstacles and provided the natural resources necessary to construct and operate the Mainline Canal.

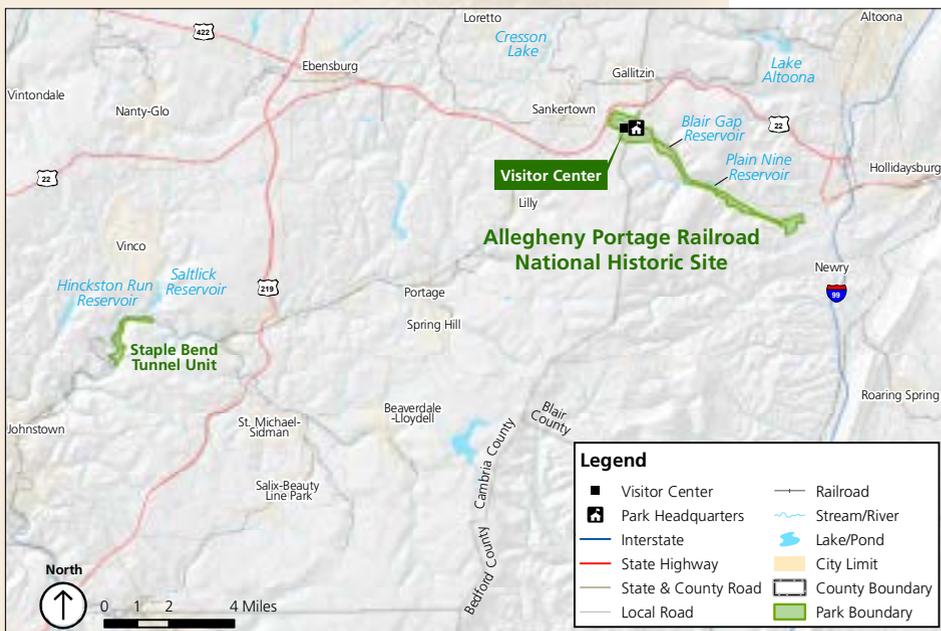


## Description

Allegheny Portage Railroad National Historic Site is in southwestern Pennsylvania in Blair and Cambria counties. The park protects the cultural resources that comprise the Allegheny Portage Railroad and tells the story of its influence on the nation. The park consists of two separate units extending across 40 miles. The main park unit is at the summit of the original portage, roughly 3 miles east of the town of Cresson and includes the visitor center, Lemon House, Incline 6 and Level 6, the Engine House 6 ruins and exhibit shelter, and Skew Arch Bridge. The park's Staple Bend Tunnel unit is approximately 16 miles southwest of the main unit and features the first railroad tunnel in the United States.

The Allegheny Portage Railroad section of the Pennsylvania Mainline Canal system played a vital role in the nation's industrial development in the early 19th century. The portage railroad operated between 1834 and 1854 and was the most complex segment in the Mainline Canal system that connected Philadelphia and Pittsburgh. It was at this segment that the canal was blocked by the Allegheny Mountains. The portage railroad was the solution to this massive obstacle. It covered 36.6 miles and rose nearly 1,400 feet when it was completed.

The railroad was equipped with 10 inclined planes, 5 on each side of the mountain. As canal boats arrived at the portage railroad, they were removed from the water and placed on rail cars. The rail cars were pulled up and lowered down the mountain by hemp, and later wire ropes, along tracks set on the inclined planes. The ropes were pulled by stationary steam engines in the engine house at the head of each incline. Each inclined plane was separated from the next by a level. The rail cars were pulled along the levels first by horse power and later by steam locomotives.



The portage railroad provided the critical link in the flow of goods, materials, and people between the Atlantic coast and the Ohio and Mississippi rivers. The portage railroad was also a major advancement in the nation's transportation infrastructure symbolizing its growing industrial prowess. The trade that occurred via the portage railroad and Mainline Canal created lasting bonds between the northeast and frontier west, which continued through the Civil War.

The Allegheny Portage Railroad has been designated a national historic landmark and is listed in the National Register of Historic Places. It has also been designated a National Historic Civil Engineering Landmark by the American Society of Civil Engineers.