RECONNAISSANCE SURVEY OF WESTERN PENNSYLVANIA ROADS AND SITES

Publication of this document should not be construed as representing either approval or disapproval of the secretary of the interior. The purpose of this document is to provide information for further consideration of the area as a submission to the Congress in compliance with Public Law 98-738.

RECONNAISSANCE SURVEY OF WESTERN PENNSYLVANIA ROADS AND SITES

United States Department of the Interior / National Park Service

SEPTEMBER 1985

Lemon House, Allegheny Portage Railroad NHS

SUMMARY

This study offers several ways of featuring the important resources of a multicounty area in western Pennsylvania. The potential national significance of Altoona's locomotive works and car shops and Johnstown's Cambria Iron Company has been identified and can be the centerpiece of a new regional visitor focus. This study also shows that some reasonable combination of local, regional, state, and national interests could make a collective effort to provide for the development of visitor oriented programs, interpretive exhibits and waysides, and access to certain sites of interest and significance. The purpose for this development would be to attract visitors from any of several nearby interstates or highways long enough to gain an appreciation of some of the forces that shaped industrial development and progress. These programs could also be linked with a tour circuit or designated scenic roads that would provide opportunities for the visitor to enjoy the area's numerous historic sites and recreational activities and enable the visitor to gain an appreciation of the scenic valleys, farms, towns, and forested slopes of the southern Allegheny region.

In recent times, as heavy industry (iron and steel production) has given way to technological advances in computers and telecommunications and major growth in the service sector of the economy, the sunset of America's first industrial revolution and the dawn of the second industrial revolution have been signaled. To survive this massive conversion of labor skills, products, transport, and raw material requirements, the area must reevaluate its future role in the nation's economy. As evidenced by Bethlehem Steel's investment in new equipment at its Johnstown operation (Franklin Works), some continued reliance on historically important industries can be logically expected; however, diversification of industry, greater emphasis on specialty products, and growth in the service sector are all areas of the region's economy that are presently the focus of the economic marketing strategies. Tourism can play an important role in the area's goal of economic diversification, and the implementation of any or a combination of the alternatives presented in this study would only add to the visitor's enjoyment and appreciation of the resources of the southern Allegheny region.

Regardless of the alternative selected, or other ideas that may surface in the future, a comprehensive approach to expanding the public's awareness of the region's cultural resources will provide present and future populations of our country with a better understanding of our nation's transportation and industrial history.

The implementation of any of the alternatives or combination of alternatives is dependent upon the support of a diverse coalition of public and private interests motivated by a common interest to enhance the preservation of important area resources as well as provide new visitor experiences to promote the region's economy.

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Rural Landscape, Sinking Valley, Blair County

INTRODUCTION

BACKGROUND

As part of its historic preservation mission, the National Park Service has been authorized by the Historic Sites Act of 1935 to conduct surveys, publish studies, and otherwise encourage the preservation of historic properties not owned by the federal government. This authority was further enhanced by the National Historic Preservation Act of 1966 which widened the scope of the National Register of Historic Places and established a program of federal matching grants for historic preservation. On October 12, 1984, Congress passed Public Law 98-473 that, among other things, directed the National Park Service "to study roads in Pennsylvania in the area of Johnstown Flood NM and Allegheny Portage RR NHS for consideration as Parkways" (see appendix A).

It is within this legislative framework that this reconnaissance survey of western Pennsylvania roads and sites was conducted. The survey focused upon the significant cultural resources of the southern Allegheny region of Pennsylvania, primarily those in Blair and Cambria counties, and made an evaluation of their potential national significance. Alternative ways in which the area's historic sites could be incorporated into a regional tourism focus that combines these resources with the scenic and recreational attributes of the southern Allegheny region are also suggested in this document.

PURPOSE

As directed by Congress, the National Park Service has prepared a study of the area's historic traces, including a discussion of significant historic, natural, and scenic resources in southwestern Pennsylvania, in order to assess if they are appropriate for designation and/or recognition under existing federal and state conservation, preservation, or recreation programs.

The major objectives of this study are

- the identification of areas of national and/or state significance
- the evaluation of the significance and feasibility of recognizing possible sites, scenic trails, or parkways
- the presentation of alternatives to preserve and interpret significant resources in the most effective manner
- the preparation of preliminary cost estimates for any necessary development, preservation, and interpretation of resources to fulfill the congressional mandate

DESCRIPTION OF THE ENVIRONMENT

Old Blacksmith Shop, Cambria Iron Works (now Bethlehem)

DESCRIPTION OF THE ENVIRONMENT

REGIONAL SETTING

The region considered here consists of seven southwestern Pennsylvania counties: Bedford, Blair, Cambria, Fulton, Huntingdon, Somerset, and Westmoreland. This region has many cultural, natural, and scenic resources and has opportunities for year-round outdoor recreation. Currently visitors to the region can enjoy good skiing, sight-seeing, boating, swimming, horseback riding, fishing, hiking, and hunting. With this vast array of opportunities available, the potential for tourism is great.

Access to the region from the Pennsylvania Turnpike (I-76) may be gained in less than an hour's driving time by using US 220, 219, 119, or 30.

THE STUDY AREA

Within the context of the seven-county region, the primary study area consists of Blair and Cambria counties. These counties are the hub of the region in terms of transportation, industry, and population.

Area Features

Both counties are rich in natural, cultural, and scenic resources, which combine for a memorable visitor experience. The major features of Cambria County include the Inclined Plane Railway in Johnstown, Johnstown Flood Museum, Johnstown Flood National Memorial, Fantasy Forest, the Seldom Seen Valley Mine, Prince Gallitzin State Park, Allegheny Portage Railroad National Historic Site, and the Schwab Estate. Blair County boasts Horseshoe Curve, Baker Mansion Historical Museum, Bland and Lakemont amusement parks, the Railroaders' Museum, Canoe Creek State Park, Fort Roberdeau, Allegheny Portage Railroad National Historic Site, and the Southern Allegheny Museum of Art. A more detailed discussion of these and other important area resources is presented later in this document.

Geographic Setting

The two-county study area includes portions of two physiographic provinces of the United States--the Valley and Ridge province, including Blair County and points east and northeast, and the Appalachian Plateaus province, including Cambria County and points west and north. The area between the two provinces is called the Allegheny Front. Here is the highest point of the Allegheny Mountain chain, separating the Susquehanna River drainage to the east and the Ohio River drainage to the west; the Blair-Cambria county line crosses this highest point.

The Valley and Ridge province is characterized by low, open, sandstone-quartzite mountains that meander from

northeast to southwest across the landscape. The valleys are formed in more rapidly eroding limestone and shale.

The Allegheny Mountain section of the Appalachian Plateaus lies between the Allegheny Front and the Pittsburgh Plateaus. These mountains are underlain with horizontal or gently folded strata and form a series of high open folds that surface as ridges. Chestnut Ridge, Laurel Ridge, and the smaller Ebensburg Ridge parallel those in the Valley and Ridge province. Numerous steep valleys separate the ridges, including the noted Conemaugh Gap through Laurel Ridge just west of Johnstown.

Land Use

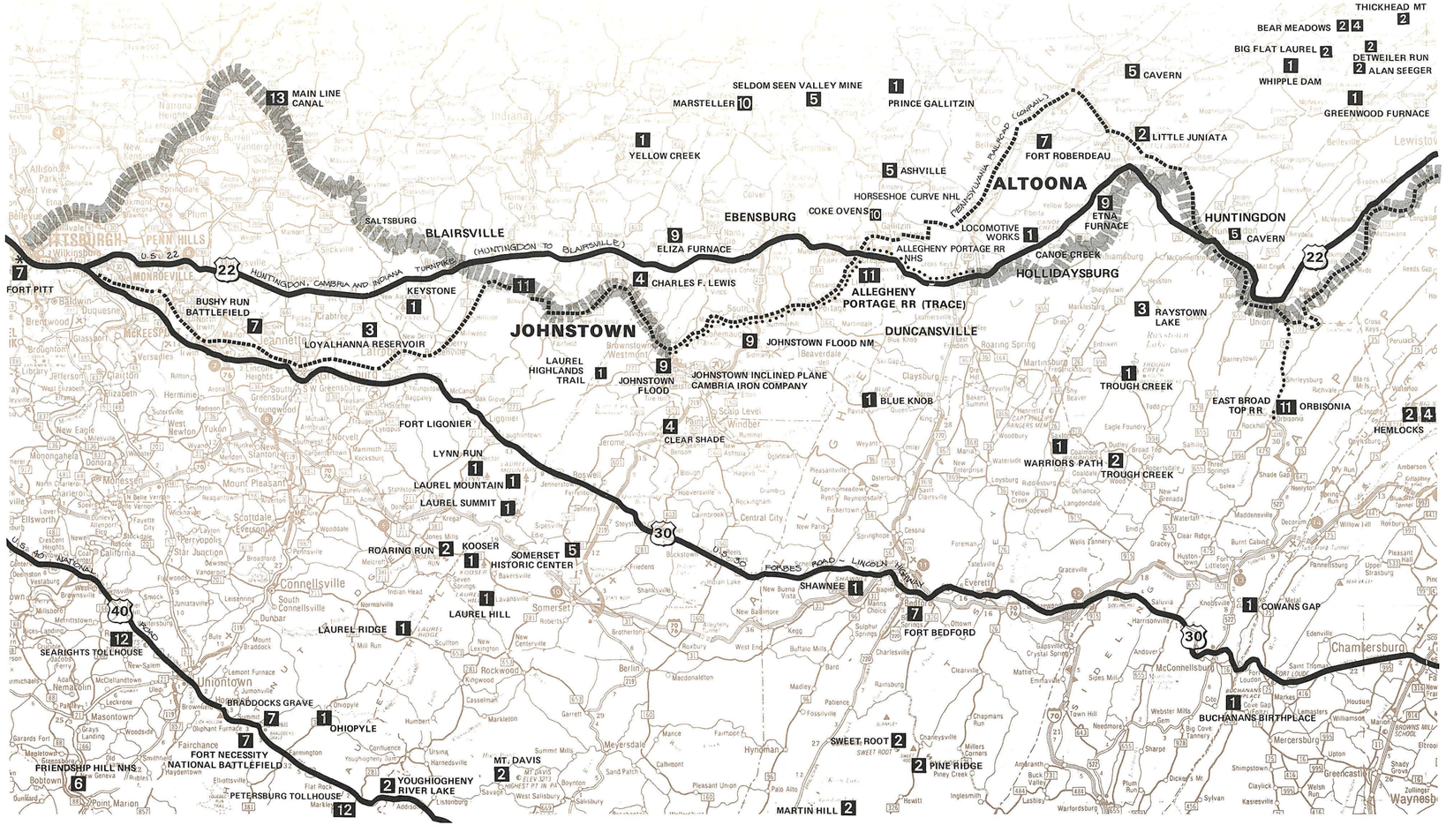
Over half the land in both counties is vacant/ undeveloped; however, when the land is developed agriculture is the primary use. The remaining major land uses in Cambria County are open space/parks/ recreation, residential, transportation and communications, mining, commercial, and manufacturing. Blair County has a similar breakdown of land uses, with residential, transportation and communications, open space/parks/ recreation, manufacturing, and commercial being the major categories. This breakdown portrays the overall rural nature of both counties, with the large amounts of undeveloped, agricultural, and open-space lands; it also indicates that transportation, mining, industrial, and manufacturing uses are still important to the area. Indeed, what makes this area dynamic is its unique mix of rural countryside interspersed with industry and transportation corridors.

Economic Base

Economic development of the region has encompassed several phases during its history. In succession, land, game, timber, agricultural crops, and dairy cattle rose in prominence and then declined. The Pennsylvania Main Line Canal and Allegheny Portage Railroad provided the transportation system to export mineral resources such as bituminous coal and iron ore. Later minerals were used on-site to develop an iron and steel industry that manufactured products for shipping to eastern and western markets. The coal industry served by the Pennsylvania Railroad boomed in the 1920s and then declined in the 1940-1960 period because of competition from oil, gas, and electric products.

The study area is currently in transition from a primary emphasis on transportation (railroads) in Blair County and the steel/mining industry in Cambria County to a more diversified economic base. Population and employment statistics reflect this transition. The population of Blair County has increased slightly, while the city of Altoona's population has actually decreased. Cambria County's population has decreased, as has Johnstown's. Population projections indicate that Blair County's population may increase at a slow rate, while Cambria County's population will likely decrease over the next 10 years.

The future of both counties depends on how well they diversify their economic base. Traditionally, Blair County has depended heavily on transportation (railroads) and agriculture, while Cambria County has been known for its mineral-based industries (bituminous coal mining and steel and iron manufacturing). Various manufacturing industries are diversifying, and there is a



regional natural and cultural resources

RECONNAISSANCE SURVEY OF WESTERN PENNSYLVANIA
ROADS AND SITES

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

natural resources

1 STATE PARK
2 STATE NATURAL/WILD AREA
3 CORPS OF ENGINEER RESERVOIR
4 NATIONAL NATURAL LANDMARK
5 PRIVATE RECREATION/TOURIST ATTRACTION

cultural resources

6 POLITICAL HISTORY SITE
7 MILITARY HISTORY SITE
8 NATURAL DISASTER HISTORY SITE
9 IRON/STEEL SITE
10 COAL SITE
11 HISTORIC RAILROADS
12 HISTORIC ROADS & RELATED SITES
13 MAIN LINE CANAL

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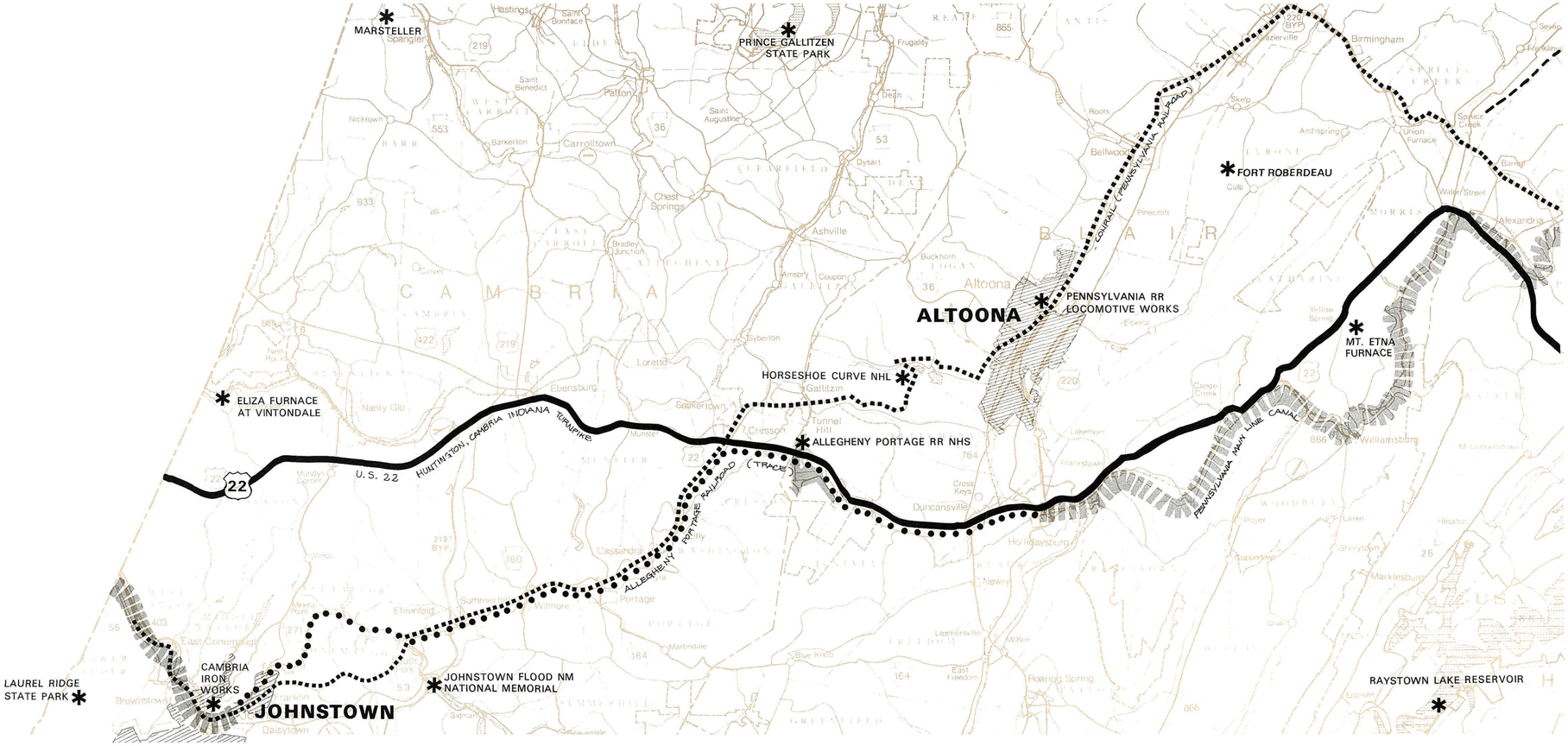

study area

RECONNAISSANCE SURVEY OF WESTERN PENNSYLVANIA ROADS AND SITES

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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greater proportion of people in both counties who are employed in the retail trade sector than there were in the late 60s or early 70s.

Tourism, as well as general growth in the service sector, is a marketing focus, and it is already a major and growing element in the area's economy. Regional and state tourism promotion staffs recognize that visitor dollars are increasingly important to the economy of the southern Allegheny region and the state as a whole. The Southern Alleghenies Travel Council and other area travel promotion agencies seek to increase tourism and tourist dollars to the area. In 1983 nearly $100 million was spent by travelers in Blair and Cambria counties. These expenditures become increasingly important when related to the increases in local/state tax receipts, employment, and an overall stimulus to the local economy. Currently for every $1 that is invested in promotion, $18 is returned to the study area's economy.

However, according to the *Central Pennsylvania Opportunity Tourism Analysis* (NPS 1985) too many small groups are trying to carry out their own tourism promotion programs individually. In Cambria County, for example, at least three groups and an umbrella organization are trying to market their area to the business, family, or group travelers: the Cambria County Tourist Council, the Prince Gallitzin Tourist and Trade Association, the Tourist and Convention Committee of the Greater Johnstown Chamber of Commerce, and the Southern Alleghenies Planning and Development Commission. Each of these groups has its own budget, overhead expenses, and marketing strategy.

In addition, the *Analysis* states that

> It would behoove representatives of the county organizations to work with the Matching Fund Coordinator of Pennsylvania's Bureau of Travel Development to determine how arrangements for cooperative tourism promotion could be made without jeopardizing existing state matching grants. According to that official, "If the county tourist promotion agencies in the area organized formally into one regional effort, the new agency would be eligible for matching funds, providing the necessary tpa designation change was made by each county involved. Our office would be willing to assist them in the necessary paperwork that is needed for any tpa merger."

DESCRIPTION AND ANALYSIS OF MAJOR RESOURCES

Altoona Locomotive Works (Conrail)

DESCRIPTION AND ANALYSIS OF MAJOR RESOURCES

The following sections describe and analyze those resources considered significant to making this area of Pennsylvania important both regionally and nationally.

NATURAL RESOURCES

Description

Though the wealth of timber, water, coal, and iron ore resources in the area was certainly a positive attribute in the settlement and growth of the area, the area's natural features also presented challenges. Area rivers, especially the Juniata, were difficult for the Pennsylvania Canal to cross, and large viaducts were constructed to carry horses and boats to the opposite shore. The high Allegheny Mountain range also presented a formidable natural barrier. However, through the ingenuity of man, this barrier was overcome, and the final and vital link connecting the Juniata and Western divisions of the Pennsylvania Canal--the Allegheny Portage Railroad--was completed. During the progress of the rail era the historic Horseshoe Curve was constructed, which allowed trains to ascend the Alleghenies and prompted social and economic growth.

Arable Land/Soils. Between 1783 and 1830 agriculture was the leading industry in the area. Underlain with limestone, the area's fertile valleys provided numerous crops. At one time in Blair County, the well-drained soils of Morrison Cove, Sinking Valley, and Canoe Valley were extensively farmed. These areas make up much of the 45 percent of the county that remains in agricultural use today. In Cambria County agricultural production includes potatoes, oats, poultry, livestock, and hay. However, because Cambria County's iron and steel industry grew, area farm acreages became smaller and agricultural production declined. As area farmers went to work in the local industries farming for some also became a part-time occupation. As interest in minerals increased in the area, farms were also sold for their anticipated underlying mineral value.

Extensive deposits of clay were found in the northern part of Cambria County. Communities such as Patton grew as area brickworks used these local sources of fire clay.

Forests. Both Cambria and Blair counties were heavily forested areas at the advent of European settlement in the region. However, the original stand of virgin timber was cleared for agriculture and for producing charcoal for iron smelting purposes. Northern hardwoods are dominant on the forested hillsides of the two-county area and include oak, black cherry, beech maple, tulip poplar, and red oak.

During the height of the iron industry timber resources were heavily logged. Because it took about 400 bushels of charcoal to produce a ton of iron, the typical charcoal furnace used about 150 acres of wood per year. Many iron furnace operators would own several

thousand acres of woodland to ensure an adequate supply. A plentiful supply of timber was an important part of the area's economy and was a prime ingredient to a flourishing iron industry.

Rivers. The major rivers and generally plentiful water supplies greatly contributed to the area's development. Early in the area's settlement water was used to power gristmills, and waterwheels moved the iron furnace bellows that forced air up through the charcoal.

During the important development of the Main Line Pennsylvania Canal, the Juniata River to the east and the Conemaugh River to the west became the area's two vital waterways, helping to complete the transportation link between Philadelphia and Pittsburgh.

Minerals. Iron ore and coal underlie much of the area. In the late 1830s iron ore beds were discovered close to Johnstown. They often ranged from 18 to 30 inches thick; some, however, were up to 4 feet. Johnstown area ore had an iron content of over 31 percent per ton and had enough limestone in it to act as a flux.

The mining of local iron ores continued until 1882 when the iron industry turned to upper Michigan and northern Minnesota for their ores, which were of a higher grade and easier to mine. Use of the Bessemer converter process of steel making dictated the shift to a better quality and more plentiful iron ore supply.

Coke, a form of coal where impurities have been removed by baking the coal in ovens, became the new substance for obtaining high furnace temperatures (needed for steel making), and thus quickly replaced charcoal as the fuel source for the area's iron and steel works.

Coal supplies in Blair County proved to be limited to an approximate 9-mile stretch at the western edge of the county. Coal was also found in Johnstown and its vicinity in the 1860s. Cambria County had four good quality deposits of bituminous coal that were adequately thick to commercially extract. Key seams included the Gallitzin, Upper Freeport, and the Upper and Lower Kittanning. In addition to making coke, coal was also used as steam coal for the area's rolling mills, other smaller factories, and for heating homes. Coal production in Cambria County peaked between 1915 and 1920, producing an average of over 18 million tons per year during this period. Although now largely depleted, significant amounts of coal were still mined in the region well into the 1960s.

Other local minerals that were important to the growth of area industry included limestone and quartz, which were used in making bricks to line open-hearth furnaces used in steel making.

The importance of locally accessible resources should not be minimized. The best example is probably the Cambria Iron Company. This companys economic health was greatly advanced by its large natural resource reserves, which included 75 million tons of fire clay, 20 million tons of iron ore, and 350 million tons of coal.

Analysis

The abundance and diversity of natural resources in the study area truly made the area unique. Overcoming some of the natural geologic/geographic barriers led to outstanding engineering marvels and the growth of the railroad and iron and steel industries. As we will discuss

later, these industries were of national importance during their heyday. Thus the natural resources, ranging from the areas topography to the abundance of timber, coal, and iron were important as they relate to settlement, growth, and prominence of the areas industry.

In addition to looking at natural resources from the consumptive point of view, it is equally important to analyze those resources that remain undisturbed. Because much of the area's natural resources were critical to the development of industry, there are few truly natural areas remaining. In fact, Charles F. Lewis State Natural Area in Cambria County is the only designated federal/state natural/wild area in the two counties.

CULTURAL RESOURCES

Description

Transportation: The Key to Settlement. The study area reflects a rich and diverse history, with many aspects requiring further professional evaluation and analysis. As with many regions throughout the United States, the historical origins and development of western Pennsylvania were marked by exploration and initial settlement as well as bloody conflict between native Americans and the advancing pioneers in the mid-18th century. Although agriculture provided an early mainstay to the local economy, transportation was the original growth industry in western Pennsylvania, which supported and was followed by iron and steel production.

Early transportation routes. The first trail through this area may well have been the Kittanning Path, which was used originally by various Indian tribes and later by settlers as they traveled from the Juniata to the Allegheny rivers along an east-west axis. Various branches of the Warriors Path permitted north-south travel. The Conemaugh Path linked the present communities of Bedford and Johnstown, and the Raystown Path traversed the southern reaches of the study area connecting Harrisburg and Pittsburgh. The study area was laced with early Indian trails, most of which have disappeared because of intensive farming practices, road building, and commercial development.

Early roads through the region developed because of the armed conflict between surrogates on the outlands of French and British imperial claims in North America. In 1758 an expedition led by General John Forbes constructed a road across southern Pennsylvania to allow British forces an avenue to approach French-held Fort Duquesne (now Pittsburgh). This access helped the British drive the French from western Pennsylvania and led to the end of the French and Indian War. During Pontiac's Rebellion in 1763 another British contingent used the Forbes Road and defeated the Indians at Bushy Run (recognized today as a national historic landmark) in present-day Westmoreland County, thus relieving pressure on Fort Pitt (old Fort Duquesne). Today this early military road's approximate right-of-way survives as US 30, or the Lincoln Highway, so designated in the early 1920s. In the 1790s settlers developed the Frankstown

Path, which connected Frankstown on the east with the Conemaugh River below Blairsville to the west.

To protect these early transit routes, travelers, and industries, the military constructed fortifications at a number of points. Frontier posts located along Forbes Road included Fort Bedford and Fort Ligonier, which have been reconstructed as tourist attractions. The Espy House in Bedford, near this historic alignment, was associated with the Whiskey Rebellion. Individual settlers also built fortifications on their farms. During the American Revolution a lead mining operation in the Sinking Valley (northern Blair County) was protected by short-lived Fort Roberdeau, which has also been reconstructed.

Following the War of 1812 a national campaign for internal improvements, such as the construction of roads and canals, started in the region with the development of the Huntingdon, Cambria, and Indiana Turnpike. By 1819 a 77-mile stretch of toll road linked Huntingdon on the east with Blairsville, west of the Allegheny Front. The toll road promoted growth in Ebensburg, the first permanent settlement in Cambria County, which had been established in 1804. Ebensburg became the county seat in 1807. A small portion of the National Road (now US 40) trended northwestward at the extreme southern end of Somerset County, and a tollhouse (still extant) was built at Addison.

Canal era. In the 1820s commercial interests demanded cheaper and more efficient transportation. By 1825 it was apparent that New York with its Erie Canal and Maryland with its National Road profited at Philadelphia's expense. Economic interest demanded action, and on July 4, 1825, work began on the state-financed Pennsylvania Canal or Main Line Canal near Harrisburg to provide a connection with Pittsburgh. The canal reached the tiny frontier community of Hollidaysburg by 1831, but a significant gap separated that point and Blairsville. Although the formidable Allegheny Front blocked the canal's path westward, ingenious engineers designed and built the Allegheny Portage Railroad in the early 1830s to haul barge freight over the mountains to Johnstown and ultimately to Pittsburgh. This railroad was finished in 1834 and was about 37 miles long.

Although the canal and portage railroad helped local commercial interests initially, in the 1850s the Pennsylvania Railroad proved to be a fatal competitor to the inadequate and outmoded inclined plane and railroad system west of Hollidaysburg, which had been rebuilt in 1855 eliminating several inclined planes with Muleshoe Curve. The state sold the Allegheny Portage Railroad right-of-way to the Pennsylvania Railroad in 1857, which closed the Allegheny Portage line within three months.

The short-lived canal era served as a potent economic stimulus to a heretofore remotely settled region. Communities such as Hollidaysburg and Johnstown became regionally important entrepots and points of transshipment.

The large canal basin in Hollidaysburg provided economic growth as did a similar installation in Johnstown; these two centers virtually developed around the basins. The local economy flourished, the population grew (Hollidaysburg from 70 in 1831 to 3,000 in 1840), isolation was reduced, standards of living rose, and outlets were secured for locally produced coal, iron, and agricultural products. Hollidaysburg, founded in 1796, became the county seat of Blair County (taking sections of the former Huntingdon and Bedford counties) in 1846. Blairsville, Saltsburg, and Newton-Hamilton also benefitted from the canal.

Saltsburg, Pennsylvania, in fact, may be the only community along the Western Division of the Main Line Canal that displays a semblance of canal era integrity, with approximately 40 extant canal era structures. Limited portions of the canal prism (channel) can be viewed to the north and south of the borough of Saltsburg. Construction of a railroad in the 1880s through the town and on top of the canal right-of-way generally obliterated traces of the canal prism, although several canal marker stones and faint remnants of the towpath can be discerned in the recently created borough park. The local canal preservation work has been spearheaded by Historic Saltsburg, Inc., whose members plan to restore and rewater a portion of canal prism north of the park and construct a canal boat replica.

The South Fork Dam was completed by 1852 to provide water for the Johnstown basin. This was the structure that failed on May 31, 1889, flooding the city. The Johnstown Flood National Memorial commemorates that tragedy with interpretive displays at the South Fork Dam site. Additional displays can be seen at the Johnstown Flood Museum.

Railroad era: An economic mainstay for a century. The heyday of the Main Line Canal ended quickly. By the early 1850s the Pennsylvania Railroad had reached the Allegheny Front, acting as a stimulus to the formation and development of Altoona, about 10 miles north of Hollidaysburg. The construction of Horseshoe Curve just west of Altoona in 1854 permitted trains to ascend and cross the mountains. This engineering marvel has provided a vital link in east-west rail traffic since the 1850s and continues to serve the Consolidated Rail Corporation (Conrail) as a mainline transportation system.

The Pennsylvania Railroad concentrated its support facilities in Altoona. Huge locomotive works known as the Altoona machine shops and Altoona car shops, with attendant roundhouses, arose in this frontier community, providing stable employment for thousands of workers since the mid-19th century. Altoona attracted the finest mechanics, engineers, artisans, and craftsmen of the day, and it was a veritable mecca of the 19th century railroad technology. Innovations and development quickly followed. A department of physical tests was established in 1874, a chemical laboratory in 1875, and a bacteriological laboratory in 1889. By 1889, with demand outpacing capacity to produce, the Pennsylvania Railroad had constructed the Juniata shops for

the construction of locomotives. This complex was northeast of the Altoona car shops and was supported by the South Altoona Foundries. "The first locomotive testing plant ever built appeared in 1905" (Alexander 1947). All the Altoona works, with some 125 buildings and tracks, covered an area of 218 acres--the "largest group of railroad shops in the world" (Alexander 1947). The complex employed 11,200 persons in its heyday. By the end of World War II 7,000 locomotives had been built in Altoona. The Pennsylvania Railroad also built car shops in Hollidaysburg in 1955.

In the final decades of the 20th century, changing modes of transportation induced by interstate highways, automobiles, trucks, and planes have all led to a decline in the rail industry in Altoona. The once busy car shops are vacant or have been turned to other uses by local businesses. No locomotives are built in Altoona, although comprehensive locomotive rebuilding and repair operations continue at the historic Juniata shops. Giant roundhouses, shops, and ancillary buildings have been demolished to avoid unfavorable taxes.

Growth of Heavy (Iron and Steel) Industry in Western Pennsylvania. Along with transportation, the local iron industry grew to national importance in the 19th century. Initially the iron industry was localized in many areas of Pennsylvania because of abundant supplies of wood, iron ore, and limestone. Early iron furnaces and forges developed in present-day Blair County at Tyrone (1805), Etna (1809), Tuckahoe Valley (Allegheny Furnace, now Altoona, 1811), and at least a dozen other sites. By 1850 iron manufacturing had become the area's leading industry "famous throughout the United States and Europe for its fine quality" (Emerson 1984). The Etna site was an early blast furnace and one of the longer-lasting enterprises. Local businessmen shipped Juniata iron to Pittsburgh by horseback. With the development of the canal in the 1830s shipping costs dipped and time to market shortened. Local iron was used for wheel rims, tools, horseshoes, and later for coal wagons, bridges, and railroad equipment such as rolling stock and rails.

Similar iron manufacturing development occurred in Johnstown west of the Alleghenies. A local iron industry in Johnstown in the early- to mid-19th century prospered because of the availability there of iron ore, limestone, and wood, along with the accessibility of the Main Line Canal for transport.

The Cambria Iron Company began in Johnstown in 1852 and was regarded by its contemporaries as the greatest of the early modern iron and steel works; it was the forerunner of Bethlehem, Jones and Laughlin, and U.S. Steel. By 1860 the Cambria Iron Company had 1,948 employees and was the largest iron firm in the nation; by the late 1880s it employed 7,000 people.

Daniel J. Morrell, general manager of the Cambria works from 1856 to 1884, either brought to Johnstown or kept there the leading metallurgists and technicians of the iron industry, and this situation was instrumental in introducing the revolutionary Bessemer process of steel making into the United States. The Cambria Iron Company provided training ground for many technicians who furthered the subsequent growth of the steel industry in the Monongahela River valley near

Pittsburgh in the 1880s. Early experiments with the Kelly converter, considered by many industry authorities as a precursor to the Bessemer converter developed in England, occurred at the Cambria Iron Company between 1857 and 1862.

The most important single innovation of the pre-Civil War years came out of the Cambria plant in 1857--general superintendent John Fritz's masterpiece, the three-high rolling mill. With this breakthrough in rolling iron, Cambria became the technological leader in producing iron rails, and Fritz became the leading engineer of the industry. The introduction of the Bessemer converter in the 1860s made steel production more cost-effective. In 1871 the Cambria Iron Company became the sixth in the United States to install a Bessemer plant (which remained in service until 1952). The production of rails established Johnstown as one of the nation's foremost iron and steel centers, and rails were a product that the Cambria Iron Company profitably produced for over 50 years. By 1867 this firm became the first American company to produce steel rails from Bessemer-processed steel shipped from eastern Pennsylvania. In the 1870s and 1880s the plant had one of the six largest blast furnaces in the nation. By 1876 Cambria's rail production exceeded any other American plant, with 10 percent of the total nationwide rail production.

The Cambria Iron Company also used other new technology in the 1860s and 1870s, including the open-hearth process of steel making. The celebrated "Cambria Link" barbed wire, which helped fence the open range of the western United States, as well as springs, plow steel, rake and harrow teeth, and agricultural implements were produced by the Cambria Iron Company.

The company was fortunate to have the basic materials in abundant amounts close to the plant on almost 50,000 acres of land it owned in and around Johnstown. In fact, the company mined coal on its own property for many years starting in 1856 with the opening of the Rolling Mill Mine in Johnstown. The company's coal mining operation produced 152,000 tons in 1860 and 250,000 tons in 1873, and by the time the Rolling Mill Mine closed in 1931 it had produced 22.4 million tons of coal and was considered one of the best mines in Johnstown. Then too, other mines in Cambria County at Franklin, Nanty Glo, and Revloc served the Cambria Iron Company. As the company phased the Bessemer converter into production, a higher grade of coal was required, which was found near Connellsville in Fayette County. More coke was needed also because of the increased size and operating procedures for melting iron in the company's blast furnaces. By 1895 the firm owned 600 beehive coke ovens in Connellsville. Coke was also produced in Johnstown well into the 20th century at the Rosedale and Franklin plants.

The Cambria Iron Company had large reserves of iron ore near its plant. The company mines produced 124,500 tons in 1860 but only about 60,000 tons 15 years later because local iron ore was not suited to the Bessemer process. By the early 1880s higher grade ore from northern Michigan and Minnesota was used at the Johnstown plant.

The Cambria Iron Company may have been the first industrial firm in the United States to establish its own

hospital. The 10-bed facility was opened in 1881 to treat injuries incurred on the job at the local mill.

Since the formation of the Cambria Iron Company the firm has undergone several organizational changes and expansion. The company leased its plant to the Cambria Steel Company in 1898, and in 1916 the plant came under the management of the Midvale Steel and Ordnance Company of Philadelphia. In 1922 Bethlehem Steel bought the Midvale firm. Production reached record highs in 1945, and at its peak 17,000 workers were employed by Bethlehem in Johnstown. Although Bethlehem Steel continues to make steel in Johnstown, employment has dropped from 11,800 in 1973 to less than 2,000 in 1985 because of reduced demand for steel and cheaper foreign imports.

Again for tax purposes, many structures--including early blast furnaces and rolling mills--have been razed, with the scrap metal being melted down for new steel. A large U.S. Steel facility shut down in Johnstown but was reopened about 1983 as the Johnstown Corporation. Cambria and its successors have made Johnstown a leading iron and steel producer for over 120 years.

Analysis

Transportation. Early Indian trails in the study area disappeared long ago because of highway construction, cultivation, development, mining, or other subjection to the imprint of man and his technology. For example a 1975 Bureau of Outdoor Recreation evaluation of the Kittanning Path concluded that from a "historic point of view, the trail does not exhibit either a single event or a continuum of events of national magnitude, nor is there a combination of events, sites, and persons which elevates it to national significance" (Bureau of Reclamation 1975). Local markers denote the course of the Kittanning Path west of Altoona.

Many of the early frontier roads survive within the rights-of-way of modern highways. To find actual remains of these roads is difficult, although there are structures that denote rights-of-way in isolated areas. Examples of such structures are the Skew Arch Bridge at Allegheny Portage Railroad National Historic Site, which carried Huntingdon, Cambria, and Indiana Turnpike traffic over the railroad, and the Petersburg tollhouse at Addison in southern Somerset County. Generally, early roads have been eradicated by subsequent construction, development around growing communities (such as Pittsburgh and Greensburg), or by encroaching vegetation. The general course of the Huntingdon, Cambria, and Indiana Turnpike is US 22, also known as William Penn Memorial Highway, which connects Altoona and Pittsburgh. In addition, the Forbes Road follows the general alignment of US 30, also known as the Lincoln Highway.

Canal remnants of the Juniata Division of the Main Line Canal (Harrisburg to Hollidaysburg) can be seen near Mt. Union and Newton-Hamilton just east of the study area, in Catherine Township in Blair County, and in other places. None of these sites have been professionally surveyed, evaluated, or entered on the National Register of Historic Places. The portage railroad at the Allegheny Portage Railroad National Historic Site has been deemed nationally significant by Congress. A section of the Western Division of the Main Line Canal (Johnstown to Pittsburgh) that traverses Indiana County is listed on the National Register;

however, according to the Pennsylvania state historic preservation officer a comprehensive survey of the entire canal prism, towpath, and lock system has not been conducted. The Army Corps of Engineers, in conjunction with the National Park Service, is in the process of preparing a limited evaluation of portions of the Western Division it manages. The 900-foot-long Staple Bend Tunnel near Johnstown is considered the first railroad tunnel in the United States. Preliminary negotiations are ongoing between the present owner, Bethlehem Steel Corporation, and the National Park Service concerning possible acquisition by the government.

Although much is known about the history and socioeconomic impact of the Pennsylvania Railroad, no actual site survey or evaluation work has been conducted at the former Altoona locomotive works or car shops. Local preservation groups such as the Railroaders' Memorial Museum are attempting to promote and obtain funding to evaluate extant cultural resources before the buildings are razed. The city of Altoona manages a small interpretive site adjacent to Horseshoe Curve, which contains displays and a large coal-burning Pennsylvania Railroad locomotive. None of the local railroad shops are listed on the National Register, although Horseshoe Curve has been designated a national historic landmark, as has the East Broad Top Railroad just east of the study area in Orbisonia, Pennsylvania.

Heavy Industry. There are remnants of early iron making in the study area. Furnaces and forges can be found at Tyrone, Mt. Etna, and Altoona in Blair County, and at Vintondale in Cambria County. According to the National Register nomination form, the "Etna Iron Furnace and its contiguous structures represents one of the best remaining examples of an early iron-making community surviving in the state." The form also states that "many of the original industrial facilities and much of the workers community still remain in fairly good condition" (NPS 1973). The Eliza Furnace at Vintondale has been restored by the Cambria County Historical Society, but like most early iron complexes, many of the nearby support structures have been removed, leaving only the stone furnace. According to the *Cambria County Historic Site Survey*, "this furnace is the only surviving blast furnace still in existence in Cambria County" and it is "highly significant to the history of the region and the importance of the steel industry" (Cambria County Planning Commission 1976b).

There have been no cultural resources surveys of the various components of the Bethlehem Steel Corporation in Johnstown because of the hazardous nature of the site. Apparently at least six structures dating from the early Cambria Iron Company still exist in Johnstown: an 1854 blacksmith shop (which is a combination octagonal design and Victorian Italianate masonry), an adjacent early office building, a pattern shop/wood shop with a hose tower, a car shop, an iron foundry, and a later-19th-century office building in downtown Johnstown. The 1889 flood destroyed much of the town, however, these buildings were not destroyed. Active industry, growth, and development have eradicated outmoded structures from any earlier time. The later Rosedale coke plant, complete with tipple and beehive ovens, displays a great deal of integrity; however, this facility is being demolished.

There are other cultural resources in Johnstown

associated with Cambria Iron Company. Two neighborhoods housed workers from the Cambria Company. Prospect Hill, just above the lower Cambria works, was developed in the 1860s and 1870s. Today this neighborhood is somewhat run-down. The planned community of Westmont, high over downtown Johnstown on Yoder Hill, drew many managers, supervisors, and higher-paid workers. The construction of the Johnstown Inclined Railway by the Cambria Iron Company in 1890 made it possible for workers to commute easily to the mills below. The inclined railway is listed on the National Register and the Historic American Engineering Record.

For a listing of proposed historic districts in Blair and Cambria counties and National Register sites in the region, refer to appendixes B and C.

Thematic Representation of Transportation and Heavy Industry

The cultural resources found in the study area could reflect several important themes and subthemes according to *History and Prehistory in the National Park System and the National Historic Landmarks Program* (NPS 1982):

Theme VII. AMERICA AT WORK (study area sites corresponding to history themes and subthemes)

B. Commerce and Industry
  2. Industry
    a. Manufacturing
      - Cambria Iron Company. At least six extant buildings (possibly more). Needs evaluation for significance and integrity.

C. Science and Invention
  3. Commerce and Industry
    - Cambria Iron Company (see above).

D. Transportation and Communication
  1. Transportation
    a. Land
      - Pennsylvania Locomotive Shops (Altoona)--needs evaluation for significance.
      - Horseshoe Curve NHL

    b. Water
      - Pennsylvania Main Line Canal--requires survey and evaluation.

According to *History and Prehistory in the National Park System*, there are a number of sites that represent the themes and the subthemes cited above including six for B.2.a., four for C.3., seven for D.1.a., and four for D.1.b. Pertaining to B.2.a., there are two early ironworks listed (Saugus and Hopewell Village), although the maturation of basic industry is not reflected in those sites. Concerning D.1.a., there is limited representation of the maturation of the 19th century's primary land transportation system--the railroad--other than the meeting of the first transcontinental railroad in Utah. Extant portions of the Pennsylvania Main Line Canal correspond to subtheme D.1.b. Adequate representation of this subtheme (canal-related transportation systems) exists within the national park system, including the Chesapeake and Ohio Canal National Historical Park and the Cuyahoga Valley National Recreation Area (Ohio & Erie Canal). Lowell National Historical Park and the Upper Delaware Scenic and Recreational River (Delaware & Hudson Canal) also have extensive canal

remnants. These thematic examples are meant to demonstrate that if professionally evaluated for their national significance and integrity, the resources found in the present study area could satisfy existing NPS history themes. This suggestion does not purport that such sites, presently managed by private interests, should necessarily be considered for inclusion within the national park system. (See the following section concerning alternatives for resource identification, evaluation, registration, and protection by local private interests.)

For a discussion of the preservation of other significant sites related to the rail and steel industry in other areas of the nation, see appendix D.

Significance

Of all cultural resources surveyed in the study area, two areas deserve in-depth evaluation. Although the rail complex in Altoona has contributed a great deal to the nation's development, it would be premature in this initial reconnaissance survey to recommend a level of national significance to this complex. The significance of this complex should be established by using National Register of Historic Places criteria and preparing appropriate documentation.

At this writing, significance has not been established for the Cambria Iron Company in Johnstown. Based on a cursory investigation of relevant sources, it appears this firm made nationally important contributions to the development of the iron and steel industry in the 1850s through the 1870s in terms of technology and organizational structure. Again, the application of the National Register criteria and the preparation of appropriate documentation would serve as a good starting point in attempting to establish national significance.

RECREATION RESOURCES

Description

The study area offers a wide variety of opportunities--sight-seeing, hiking, skiing, boating, swimming, camping, picnicking, fishing, and hunting, which are offered by federal/state/local governments and private enterprise. Major recreation areas (as shown on the region map) range from Prince Gallitzin State Park, Canoe Creek State Park, and portions of Laurel Ridge State Park to cultural attractions such as Allegheny Portage Railroad National Historic Site, Johnstown Flood National Memorial, Johnstown Flood Museum, Horseshoe Curve, and Fort Roberdeau, to other attractions like the Fantasy Forest and the Seldom Seen Valley Mine. Indeed, most of the opportunities available to the visitor revolve around the area's fascinating history and attendant engineering achievements--like Horseshoe Curve, the Pennsylvania Main Line Canal, and the Allegheny Portage Railroad.

The study area is flanked by three national scenic trails: the North Country Trail to the northwest, the Appalachian Trail to the east, and the Potomac Heritage Trail to the south. In 1983 a national recreation trail was designated at Bear Run (a residential complex near Fallingwaters that was designed by Frank Lloyd Wright). National recreation trails are also at two NPS

areas in the region--Friendship Hill and Allegheny Portage Railroad national historic sites.

The Laurel Highlands Trail is part of the state trail system and straddles the Laurel Ridge from Johnstown to Ohiopyle State Park. Recently Pennsylvania has applied to the secretary of the interior for designation of the Laurel Highlands Trail as the northernmost segment of the Potomac Heritage National Scenic Trail. National scenic trail designation is also being sought for the Ohiopyle Trail, which linkes the Laurel Highlands Trail with the U.S. Corps of Engineers lands at Youghiogheny Reservoir. Three other noteworthy trails in the region are included in the state trail system--the J.P. Saylor and Turkey trails, which are southeast of Johnstown, and the Mid-state Trail, which is northeast of Altoona.

There are three rivers in the southwestern portion of the region that are worthy of mention. The Youghiogheny River (from Connellsville to the Youghiogheny Dam) was studied and found to be eligible for inclusion in the national wild and scenic rivers system. The report recommended that the river be designated through state action; however, action has not yet been taken by the state. The state has also completed a study of Dunbar Creek (from Dunbar to the Maryland state line) and found it eligible for inclusion in the Pennsylvania Scenic River system; this recommendation is being considered by the state legislature. Bear Run (from its headwaters to Ohiopyle) is currently being studied by the state; results are not currently available.

Pennsylvania has also designated water trail routes on more than 14 rivers in the study region, including the Juniata and Conemaugh rivers.

Analysis

The recreational resources within the study area collectively attract large numbers of visitors from the region and, to a lesser degree, the state. However, if the cultural resources discussed in the cultural resources section were adequately preserved, interpreted, and promoted in combination with the natural, scenic, and recreation resources of the area, there would be a greater likelihood of drawing visitors on a national basis.

Inclusion of the Laurel Highlands Trail as part of the Potomac Heritage Trail could provide national status to a trail that has Johnstown as its northern terminus and would give Johnstown access to other important trails in the regional trail network.

SETTLEMENT PATTERNS

Description

In the study area settlement patterns were strongly influenced by topographic features and availability of natural resources. Even today most of man's activity is restricted to the valley floor, with little development on the mountain slopes and with circulation routes following gaps made by stream courses. The circulation route itself influenced economic growth along its path. Two distinct settlement patterns emerged--clusters and linear strip developments.

Altoona and Tyrone developed in a wide valley paralleling the Allegheny Front and were clustered around Pennsylvania Railroad shops. Johnstown is at

the junction of the Little Conemaugh River and Stony Creek. Framed by steep mountains, this community grew around the Cambria Iron Company mills and factories, which served the iron and steel needs of the country for many years.

Early transportation systems such as the Main Line Canal/Allegheny Portage Railroad were responsible for linear new town development. Newton-Hamilton, Hollidaysburg, Duncansville, Blairsville, and Johnstown began and flourished to serve canal and railroad trade. On the summit of the Allegheny Mountains, Gallitzin Summit, and Cresson developed along the portage railroad. Also largely dependent upon railroads were the towns of Lilly, Cassandra, Jamestown, Portage, Wilmore, Summerhill, and South Fork along the western slope.

Analysis

The recurring theme of human interest that surfaces in the region's development is the ways people have adapted to challenge and have overcome the formidable obstacles in building a life in the western Allegheny geography. While the environment of the western Alleghenies is beautiful, it can also be harsh, rugged, and incredibly difficult. The fact that people here soon transformed the area into a nationally renowned transportation and iron/steel-making center is an important part of the story. Equally important are the patterns of settlement/development that emerged as a result of these economic circumstances. The communities of Johnstown and Altoona remain as important regional population centers, and the smaller communities of Hollidaysburg (canal era) and Marsteller (coal mining town) perhaps best typify the area's importance and heritage. The other communities already mentioned add to an understanding and appreciation of the area's past. The region thus offers travelers a wide range of cultural and landscape diversity.

CONCEPTS FOR THE FUTURE

Office Building, Cambria Iron Works

CONCEPTS FOR THE FUTURE

The concepts discussed in this section present four alternatives for the identification, evaluation, preservation, interpretation, and development of significant resources associated with the origins and growth of western Pennsylvania. The four alternatives offer preliminary guidance on how significant resources in the study area should be treated. Because a number of these resources are privately owned and managed and pose potential safety hazards, formal contact must be initiated with the owners prior to implementing certain features of the following alternatives. The alternatives represent the collective agreement by the study team, which is not to say that portions of one alternative could not be melded to a section of another thus producing a hybrid concept. Because preceding surveys have not evaluated some of the most important resources discussed in this document, it is incumbent for this study to make a preliminary assessment of those significant resources that merit further evaluation and protection.

The alternatives suggested in this document offer suggestions for evaluating, protecting, and promoting the important cultural, natural, recreational, and scenic resources of the area. The alternatives also provide several implementation and management approaches. Alternative 1 concentrates on a site-specific approach and evaluates future cultural resource program protection needs. Alternative 2 offers an approach of two concentrations of significant resources based upon the iron and steel industry in Johnstown and the rail industry in Altoona, linked by a designated tour route. Alternative 3 builds upon the concepts of alternative 2 but adds a parkway or scenic road concept that links culturally important centers. Alternative 4 emphasizes a regional perspective to the protection of related historic resources with an emphasis on visitor use and appreciation through the construction of a scenic parkway and visitor information centers and by establishing several tour routes.

The implementation of any or a portion of these alternatives is contingent upon the financial and manpower support of a wide range of forces and institutions in the area, involving the local, state, and federal levels as well as the cooperative support of private businesses and organizations. Without widespread cooperative support future feasibility studies will be fruitless. Preliminary cost estimates are in the "Strategy for Action Common to All Alternatives" section.

Federal funding support necessary to implement any alternative or alternative elements could include supplemental appropriations for existing technical assistance programs such as the Historic American Engineering Record (HAER), the National Register of Historic Places, and federal matching preservation funds. Based on the alternative or alternative elements selected, new federal funding for specific project work not covered under the authorized programs would also be necessary.

ALTERNATIVE ONE: INDIVIDUAL SITE PRESERVATION AND PROMOTION

Description

This alternative emphasizes site-specific preservation of a number of significant cultural resources in the two-county study area. Preservation activity would be conducted on a site-specific basis by existing organizations without any overall planned coordinating agency. This alternative entails the structural preservation of the following:

1. *Pennsylvania Main Line Canal Features*--Many canal-related structural features and the canal prism exist along the right-of-way from the Susquehanna River to the Allegheny. Numerous ownerships are involved. Remnants of the canal in Indiana County are listed on the National Register.

2. *Allegheny Portage Railroad National Historic Site*--This historic inclined railway system was built in the early 1830s to connect two sections of the Main Line Canal. It is a National Park Service area and it is listed on the National Register.

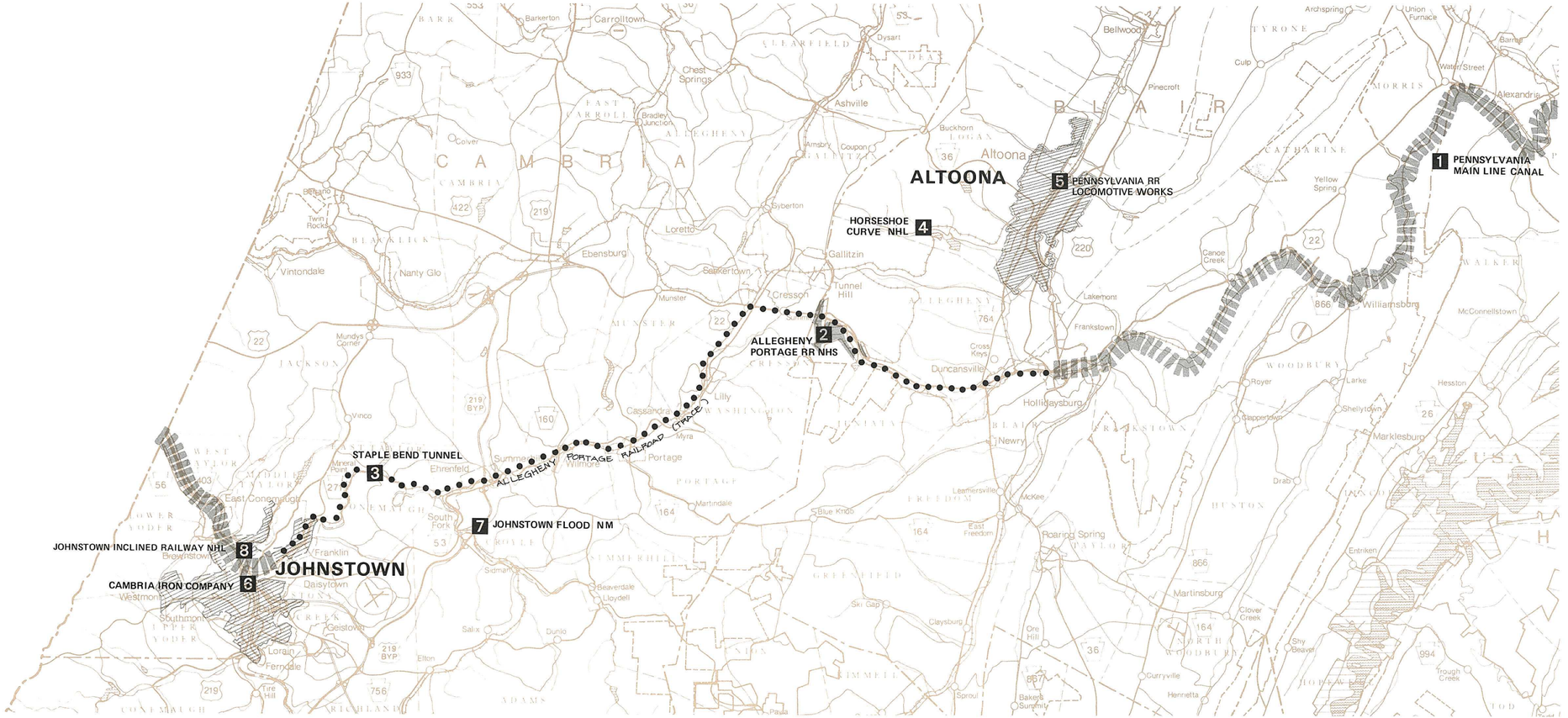
3. *Staple Bend Tunnel*--Negotiations between Bethlehem Steel and the National Park Service are ongoing concerning possible federal acquisition of this resource. This tunnel is known as the first railroad tunnel in the United States.

4. *Horseshoe Curve*--Horseshoe Curve was a significant engineering development that allowed trains over the Alleghenies near Altoona. This curve is still used and is managed by Conrail. It is a national historic landmark site.

5. *Pennsylvania Railroad (Conrail) Locomotive Works, Altoona*--Several late 19th-century structures from Pennsylvania Railroad's locomotive works and testing facilities are in Altoona. They are currently managed by Conrail and have no National Register status.

6. *Cambria Iron Company*--At least six structures of the Cambria Iron Company, including the 1854 blacksmith shop, the first administration building (both structures are on Bethlehem Steel Corporation property), the pattern shop/wood shop, the car shop, the iron foundry, and the second administration building in downtown Johnstown would be preserved. There is no present National Register status of these structures.

7. *Johnstown Flood National Memorial*--The South Fork Dam, which was built to provide water for the Pennsylvania Canal, collapsed on May 31, 1889, leading to the disaster at Johnstown. The Elias J. Unger house is nearby. This is a National Park Service area and it is listed on the National Register.

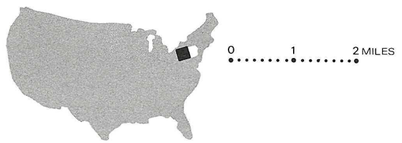


alternative 1

INDIVIDUAL SITE PRESERVATION AND PROMOTION

RECONNAISSANCE SURVEY OF WESTERN PENNSYLVANIA ROADS AND SITES

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



1 MAIN LINE CANAL
2 ALLEGHENY PORTAGE RAILROAD NHS
3 STAPLE BEND TUNNEL
4 HORSESHOE CURVE
5 PENNSYLVANIA RAILROAD LOCOMOTIVE WORKS
6 CAMBRIA IRON COMPANY
7 JOHNSTOWN FLOOD NM
8 JOHNSTOWN INCLINED RAILWAY

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8. *Johnstown Inclined Railway*--This inclined plane was built in 1890 as a means of transportation for Cambria Iron Company workers who lived in Westmont. It served as a commuters' system for many years. This site is a national historic landmark.

Visitor Experience

If implemented, this alternative would offer visitors localized opportunities to learn about and appreciate these specific sites as they relate to the origins and development of western Pennsylvania, especially in the areas of transportation and industrial growth. Visitors would receive interpretive materials and on/off-site presentations without any necessary comprehensive interpretation of the interrelationship of the various other sites highlighted in this alternative. Visitor interpretation would be the individual responsibility of various local, private, state, and federal organizations/agencies without formal coordination or organization.

Implementation

Canal Features. Until an exhaustive ground survey of the Western and Juniata divisions of the canal has been completed, it is difficult to make recommendations concerning which other specific sections should be nominated to the National Register or possibly added to the Allegheny Portage Railroad National Historic Site as mandated in the enabling legislation. National Register nomination forms would be completed for significant resources. If asked to conduct such a survey and if funds were made available, the National Park Service could provide technical assistance subject to manpower availability. The cost of structural preservation would depend upon which sites were selected.

Railroad Structures. Basic survey and evaluation of the buildings, equipment, features of the Altoona locomotive works, and other features related to the rail industry could be accomplished by a HAER team coordinated by the National Park Service's Washington Office provided the agency was asked to conduct this work and funding was available from private and/or public sector appropriations. In Altoona the Railroaders' Memorial Museum should assume a lead role in coordinating this project.

The fieldwork at the Altoona shops and yards should be phased, with a historian being involved initially to provide the base data and fundamental recommendations. The second phase would involve intensive photography as well as HAER-quality measured drawings prepared by an architectural team which would record all important structures. In addition, because many of the buildings have been demolished or altered, it is strongly recommended that a program of industrial archeology be implemented to record sites (such as the roundhouses) that are no longer extant. A documentary base of this important complex should be prepared for future research and inspection whether or not any of the buildings are actually preserved through public or private efforts. The inclusion of the site on the National Register is the minimum preservation effort required.

Iron and Steel Industry. The same procedures hold true for the old Cambria Iron Company holdings in Johnstown as for the Altoona shops and yards. If local interests such as the Johnstown Flood Museum are serious about the preservation of this complex, then arrangements should be made with the private sector, funds should be secured, and a contract for a HAER survey team should be negotiated.

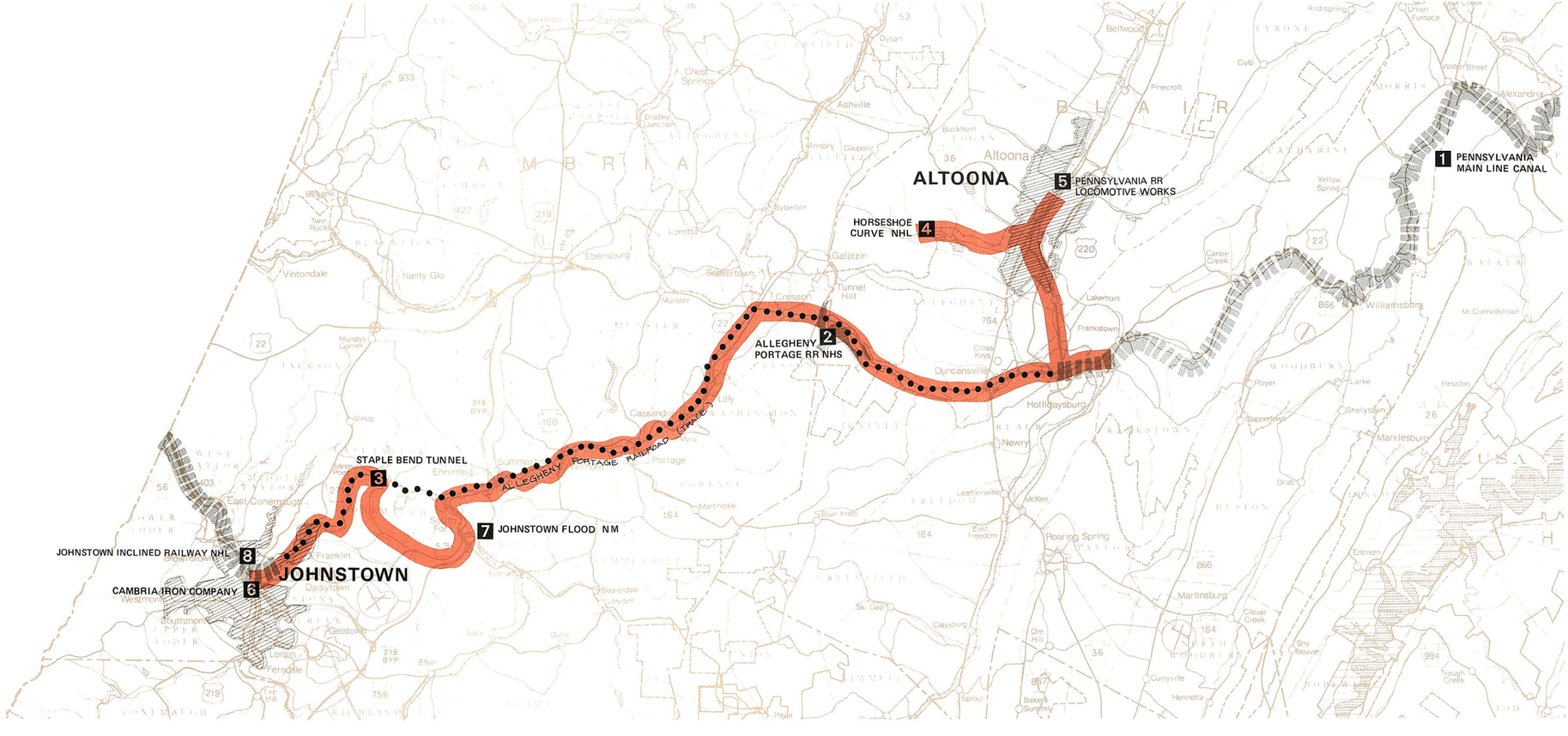
If congressional interest mandates further evaluation and financial support or grants are procured, the Mid-Atlantic Region could provide suitable personnel. A cultural resources management plan could be prepared only after basic data has been assembled and contacts have been made with the property owners. This approach calls for a great deal of technical assistance from a lead institution, which could be the National Park Service or the state of Pennsylvania; it also calls for similar cooperation from the private sector and local interests.

These suggested approaches are incremental, with full participation and cooperation of all interested parties. These potentially nationally significant resources have not been comprehensively surveyed or evaluated. The present study is only a first step in identifying the resources pertaining to large-scale industrial enterprises in western Pennsylvania. It would be the principal task of future survey, investigation, and evaluation to prepare a sufficient level of documentation through the National Register and HAER programs to recognize the contributions of these resources to the development of 19th century transportation and industrialization. Resource data resulting from the studies could be used by individual entities in their interpretive programs. Future preservation activity would be the responsibility of existing property owners working in concert with organizations or agencies interested in the protection and interpretation of individual sites.

ALTERNATIVE 2: INDIVIDUAL COMMUNITY DEVELOPMENT AND PROMOTION

Description

This alternative would be based on developing a comprehensive, community-wide approach to preserving, interpreting, and promoting the area's two major themes--transportation and the iron/steel-making industry. This alternative is focused primarily in two communities, Johnstown and Altoona. The major resources to be considered related to transportation include Horseshoe Curve, the locomotive works and railroad museum in Altoona, the sites of the Pennsylvania Main Line Canal basins in Hollidaysburg and Johnstown, the Allegheny Portage Railroad National Historic Site, Staple Bend Tunnel, and the Johnstown Inclined Railway. The major resources related to iron/steel making are the Bethlehem Steel plant (particularly the six remaining buildings from the Cambria Iron Company) and the Prospect Hill and Westmont neighborhoods in Johnstown. Other resources of interest include the Johnstown Flood National Memorial, the Johnstown Flood Museum, and the Grandview Cemetery. An interpretive/tour route (shown on the Alternative 2 map) using existing roads would connect these resources and follow the general alignment of the Allegheny Portage Railroad to give emphasis to the early transportation mode that linked these two settlement areas. Also a recreational hiking trail could follow this alignment. Visitor information

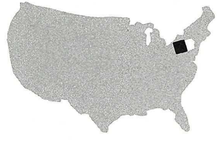


alternative 2

INDIVIDUAL COMMUNITY DEVELOPMENT AND PROMOTION

RECONNAISSANCE SURVEY OF WESTERN PENNSYLVANIA ROADS AND SITES

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



0 1 2 MILES

1 MAIN LINE CANAL
2 ALLEGHENY PORTAGE RAILROAD NHS
3 STAPLE BEND TUNNEL
4 HORSESHOE CURVE
5 PENNSYLVANIA RAILROAD LOCOMOTIVE WORKS
6 CAMBRIA IRON COMPANY
7 JOHNSTOWN FLOOD NM
8 JOHNSTOWN INCLINED RAILWAY
POSSIBLE TOUR ROUTE/TRAIL

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and interpretive sites would also be established in the Altoona and Johnstown communities.

Visitor Experience

The main focus of the visitor experience is to create an understanding and appreciation for the strategic role this area played in the transportation and iron/steel-making development of this country. This would be done through:

1. Providing a comprehensive visitor experience relating to iron and steel-making themes within the Johnstown area. The Cambria Iron works complex would likely be the principal focus.

2. Providing a comprehensive visitor experience relating to the transportation industry theme in the Altoona area. The locomotive works and Horseshoe Curve would likely be the principal features.

3. Designating and developing a tour route within each community and a link between them to highlight features, such as the Allegheny Portage Railroad, along the way.

4. Potentially establishing a central visitor facility in each community to provide for initial visitor contact, education, and information.

The combination of major cultural resources, countryside, charming communities, and the undeveloped nature of the area that would be connected by a tour route would provide an informative and enjoyable visit. There are also numerous other opportunities available to the visitor as described previously. In other words, effective preservation, interpretation, and promotion should help the visitor understand the whole transportation and iron/steel-making story described as well as the natural resources/landscape in which these activities took place.

Implementation

In order to provide an integrated approach to resource preservation, interpretation, and promotion, a single, community-focused organization representing tourism interests, such as the Chamber of Commerce, should coordinate all activities within the community. In addition to providing a community-wide approach to promoting these major resources, this agency would be responsible for resource protection by using the implementation techniques described in alternative 1 and preparing a comprehensive interpretive prospectus for the area's major resources. Additionally, each community could be responsible for developing a central visitor facility. The Southern Alleghenies Commission Travel Development Unit should coordinate with the chambers of commerce and local tourism interests in each community to also promote a regional approach to visitor use of the area and the provision of services. The designation and development of a tour route to link Johnstown and Altoona would be an appropriate responsibility to be undertaken by this regional body.

ALTERNATIVE 3: THE TRANS-ALLEGHENY LINK/COOPERATIVE COMMUNITY APPROACH

Description

The concept for this alternative is to embody all the provisions of alternatives 1 and 2 and, additionally, to unite many of the attractions along and adjacent to the Main Line Canal (the Allegheny Portage Railroad, and the Huntingdon, Cambria, and Indiana Turnpike), with the other area cultural resources--particularly the Cambria Iron Company and the Altoona locomotive works. To accomplish this additional provision, a transportation corridor study would be proposed under this alternative. The study would be undertaken jointly by the Federal Highway Administration, the National Park Service, and the Pennsylvania Department of Transportation to survey, evaluate, and determine if a feasible new or existing automobile and nonmotorized trail route exists that follows the primary attractions and affords appropriate accesses to the Main Line Canal and Allegheny Portage Railroad. If an existing route is appropriate, state scenic road designation would be sought. If a new road is needed, the possibility of designing and constructing a new parkway should be evaluated. If a parkway concept results, it should not be considered just a road, but instead as a linear park through scenic lands where a road is merely part of the concept.

Opportunities for any new trail corridor to link the Mid-state trail to the east with the northern terminus of the Laurel Highlands Trail to the west should be explored and included in the transportation corridor study.

Regardless if it is located along a scenic road or within a new parkway right-of-way, such a trail would both allow for the interpretation of the area's cultural features and attractions and provide a vital link within the region's trail network. Opportunities for bike touring could also be explored, which would enhance area tourism and expand visitor options.

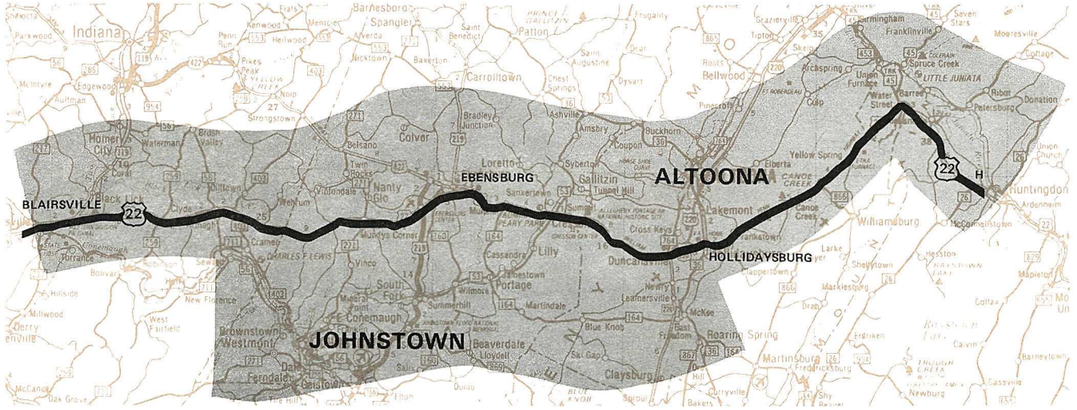
This transportation corridor study should be prepared considering the following options:

- **Option A**: This option would consider designating and enhancing an existing road as a scenic road from Blairsville to Huntingdon that also includes Johnstown and Altoona/Hollidaysburg.

- **Option B**: This option would consider acquiring and constructing a parkway between Johnstown and Altoona/Hollidaysburg that connects with a scenic road to Blairsville to the west and a scenic road to Huntingdon to the east.

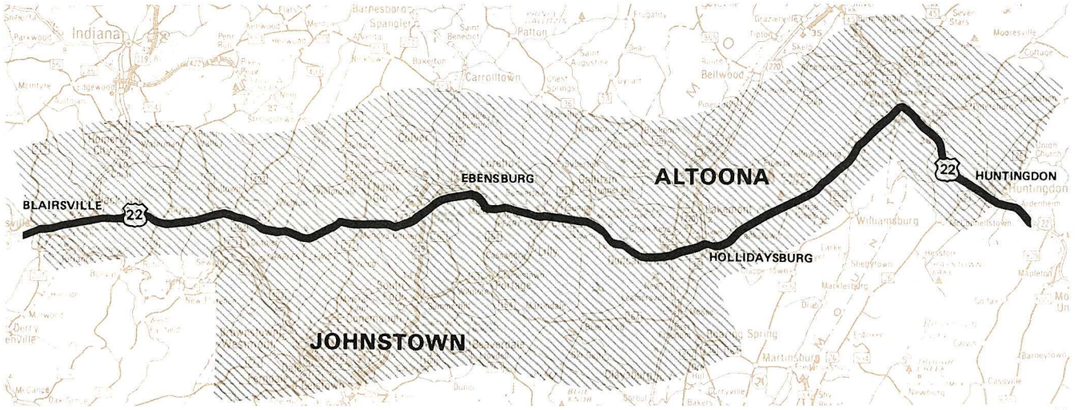
- **Option C**: This option would consider acquiring and constructing a parkway between Blairsville and Huntingdon that would include Johnstown and Altoona/Hollidaysburg.

The Johnstown to Altoona/Hollidaysburg segment would include examining routes traversing the ridge tops and ascents/descents of some 2,000 feet. The total terrain variation would climb and descend 4,000 feet. This route would give access to historical features, old and new transportation technology, the old canal basin sites, and sites of 19th and 20th century coal/iron production, transportation, and steel making.



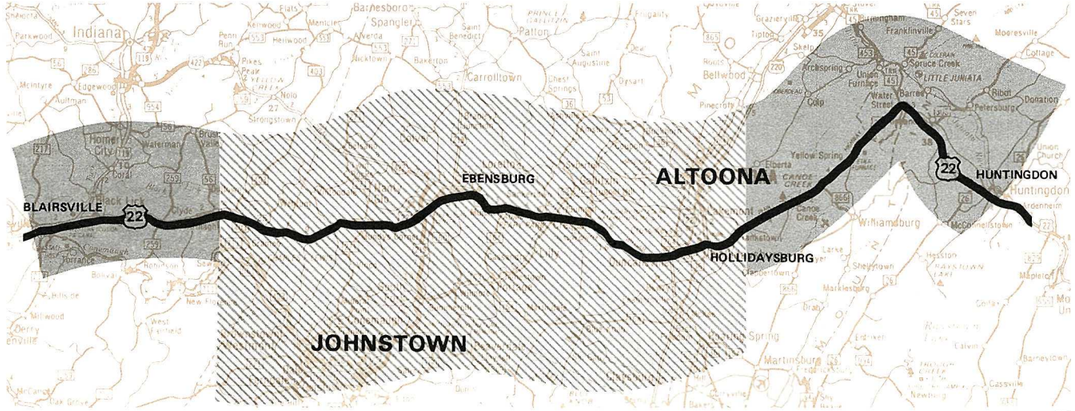
ALL SCENIC ROAD ▫ HUNTINGDON TO BLAIRSVILLE

OPTION A



ALL PARKWAY ▫ BLAIRSVILLE TO HUNTINGDON

OPTION C



PARKWAY ▫ ALTOONA TO JOHNSTOWN

SCENIC ROAD ▫ ALTOONA TO HUNTINGDON, JOHNSTOWN TO BLAIRSVILLE

OPTION B

alternative 3

RECONNAISSANCE SURVEY OF WESTERN PENNSYLVANIA
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The expanded Blairsville to Huntingdon segment would not only provide access and opportunity for visitors enjoyment, but also would allow interpretation of a more comprehensive aspect of transportation history and iron/steel making.

Visitor Experience

A scenic road or a newly constructed parkway would link the region's unique resources and characteristics; link important regional centers like Altoona, Ebensburg, Hollidaysburg, and Johnstown; and promote the region's identity to travelers. The concept would be geared toward attracting more visitors to the region and making it easier for them to access area attractions. A scenic road designation, parkway construction, or even a more formal designation of US 22 as a state scenic highway would promote the idea of a major tour route and increase the visibility of the vast tourism resources of western Pennsylvania.

The designation of a scenic road would bring improvements such as interpretive signing, information kiosks, and convenience stops for resting, picnicking, and overlooks. These improvements would afford visitors opportunities to become acquainted with the range of experiences offered by Pennsylvania's western Alleghenies.

The parkway option would substantially upgrade the quality of and heighten the range of the overall visitor experience. Its primary purpose would be to dedicate a strip of land for improving the visitors' aesthetic experiences while uniting nationally significant attractions such as the Allegheny Portage Railroad National Historic Site, Johnstown Flood National Memorial, Staple Bend Tunnel, Horseshoe and Muleshoe curves, canal basin sites, and perhaps portions of the Main Line Canal. It would also encompass additional important regional themes, attractions, and tourist services, which could increase the appeal of a tour circuit. The themes that could be expanded from a parkway include exposure to 19th and 20th century transportation technology, iron and steel production, coal mining, the region's geology, railroading, locomotive and railcar shops, museums, local handicrafts, mountain and lake recreational sites, historic engineering works, and rural agricultural landscape settings. There would be more vistas, turnouts, and picnic areas, and the road itself would be designed and constructed with aesthetic quality for the visitor in mind.

Implementation

This alternative would rely extensively on networking between governments and tourism interests (probably under an umbrella organization such as the Southern Alleghenies Planning and Development Commission or Laurel Highlands, Inc.). There is a need to market the concept of the western Alleghenies as a major tourism region, and the attractions that characterize this region must be publicized through more coordinated promotional efforts. Also, more appropriate signing and access could attract more visitors into the area (from I-80 north of the region and from the Pennsylvania Turnpike (I-76) to the south).

A transportation corridor study should be undertaken as soon as possible. The National Park Service could

participate in the study, with the Federal Highway Administration, the Pennsylvania Department of Transportation (PENNDOT), and local governments. The study should determine alternative scenic road corridors, designation of certain roads as state scenic roads, investigate potential alignments, define rights-of-way, and explore all factors and conditions to determine the feasibility of building a scenic road or parkway that would give easier access and improve the visitor's experience, comfort, and safety. One possibility would be improving US 22 to a high-grade scenic road with improved signing, creating a logo signifying the historic trace, and renaming it the "Western Alleghenies Heritage Trace" or, in the case of a parkway, the "Allegheny Crest Parkway." (Whatever the form of the road, the actual name could be the outcome of a regionwide competition.)

Final comprehensive design phases would result in detailed schemes to locate the road's alignment, gradients, accesses to featured attractions, overlooks, interpretive stops, and grade-separated crossings. The parkway would incorporate rights-of-way or alignments of varying widths, respecting and preserving significant topographic and cultural conditions. Perceptible borderlines between terrain and parkway should be eliminated. Native plants should be utilized to the maximum extent possible. The design treatment of the new parkway should incorporate the best of modern parkway design with aesthetic, engineering, and safety standards.

US 22 and other similar highways that link cities that are important in this alternative reflect a traditional example of linear development along America's roads. Restaurants, motels, gas stations, tourist attractions, farms, residences, and small communities should not be viewed as detracting from scenic qualities but should be interpreted as integral aspects of this linear development. The team has extensively surveyed roads and trails in the southern Alleghenies region and has observed that much of this development has been bypassed by the construction and use of faster, more effective four-lane highways and expressways such as the Pennsylvania Turnpike (I-76) to the south and I-80 to the north of the study area. These newer roads and upgraded projects have left many portions of these noninterstate highways reflecting an appearance of the 1940s and 1950s. The parkway concept can thus enhance these scenic routes through western Pennsylvania and interpret linear highway development to provide a meaningful visitor experience compatible with existing use. Consequently the alternative not only offers a cohesive link between major concentrations of significant resources, but in itself has scenic, cultural, and historic validity because the rights-of-way may correspond to historic routes such as 1820s Huntington, Cambria, and Indiana Turnpike.

ALTERNATIVE 4: REGIONAL COOPERATIVE DEVELOPMENT AND PROMOTION

Description

The fourth alternative provides for an appreciation of the many cultural and historic sites, features, and attractions of the southern Allegheny region and emphasizes their accessibility, use, and protection. The alternative also allows for some of the more significant historic sites that directly relate to the major transportation and industrial development themes to receive federal recognition.

Alternative 4 builds upon the three previous alternatives with regard to the inventory, analysis, and protection of the area's significant cultural resources. While the focus would also remain on the transportation and iron/steel-making themes, the area involved would be greater and more sites of regional significance would be included. Not only would the principal cultural features of Johnstown's Cambria Iron Company, Altoona's locomotive works, and Horseshoe Curve receive attention, but so would other cultural sites that provide additional interest and education about the region's role in transportation, iron and steel, coal, and other industry.

To expand the transportation theme certain portions of the Pennsylvania Main Line Canal involving both the Juniata and Western divisions and including turning basins, canal locks, and canal traces would be added. The area of interest would be the canal remnants to the east and west of the Allegheny Portage Railroad. This would allow completion of the portage railroad story and provide historic evidence of the transition from canal boat to rail and back to canal.

To integrate the story of iron making in the region, several sites that predate the Cambria Iron Company would be included. Mt. Etna and Vintondale would receive particular attention. At Mt. Etna the forge, worker cabins, barns, and furnace provide a complete picture. At Vintondale the Eliza Furnace still stands, complete with heat exchanger.

To interpret the importance of the rail era, not only would the Altoona railyards, locomotive works, and the nearby Horseshoe Curve area receive attention, but also Muleshoe Curve, Conemaugh Gap, and Johnstown's Union Station and extensive rail network (related to the transport of iron and steel). As an earlier example of the area's rail transport industry, the East Broad Top Narrow Gauge Railroad at Orbisonia, with its intact roundhouse, station, and rolling stock, would also tie in. As the iron area industry grew and evolved into steel making, the demand for and local availability of iron ore, limestone, clay, and coal was as important as the development of the rail industry in exporting the products to other markets. The Marsteller community in northwestern Cambria County probably provides one of the best examples of a coal town in the region. Complete with mines, mine tailings, company housing, and even a company store, Marsteller is an excellent example of a one-industry company town and provides a glimpse of the lifestyles and conditions of the coal mine worker.

Visitor Experience

Under alternative 4 the various cultural features of the region would be included in an overall visitor experience, which would also feature recreational, scenic, and natural values. To maximize visitor exposure and opportunities to experience these features, efforts should be made to make them as accessible as possible and to integrate them into regionwide tourism promotion efforts. Provision for visitor use would build upon the three previous alternatives, as would the protection of significant resources. The following are the principal proposals for visitor use under this alternative.

Visitor Information Centers. At strategic regional crossroads, tourism and information centers would

provide the traveler with information about the various opportunities to enjoy the southern Allegheny region. This would include information concerning the area's historic resources as well as opportunities to enjoy recreational and scenic attractions. Historic sites would not be limited to those themes discussed in this study. Any sites not previously available for visitor use and appreciation could and should be integrated with other historic sites. These include Forts Ligonier and Roberdeau, Bedford, the East Broad Top Railroad, Old Bedford Village, Somerset Historic Center, the Seldom Seen Valley Mine, and the Baker Mansion. Recreational opportunities at Prince Gallitzin, Raystown Lake, Blue Knob, Laurel Mountain, Laurel Highlands Trail, Seven Springs, and other area state parks and winter sports activities along the Laurel Ridge should also be featured.

At Prince Gallitzin a 1,500-acre tract has been proposed as a conservation education area to be known as NATUREALM. The visitor could learn about present and past uses and abuses of waters, forests, and wildlife. A visitor would also receive a basic introduction to the more important accomplishments and problems in resource management.

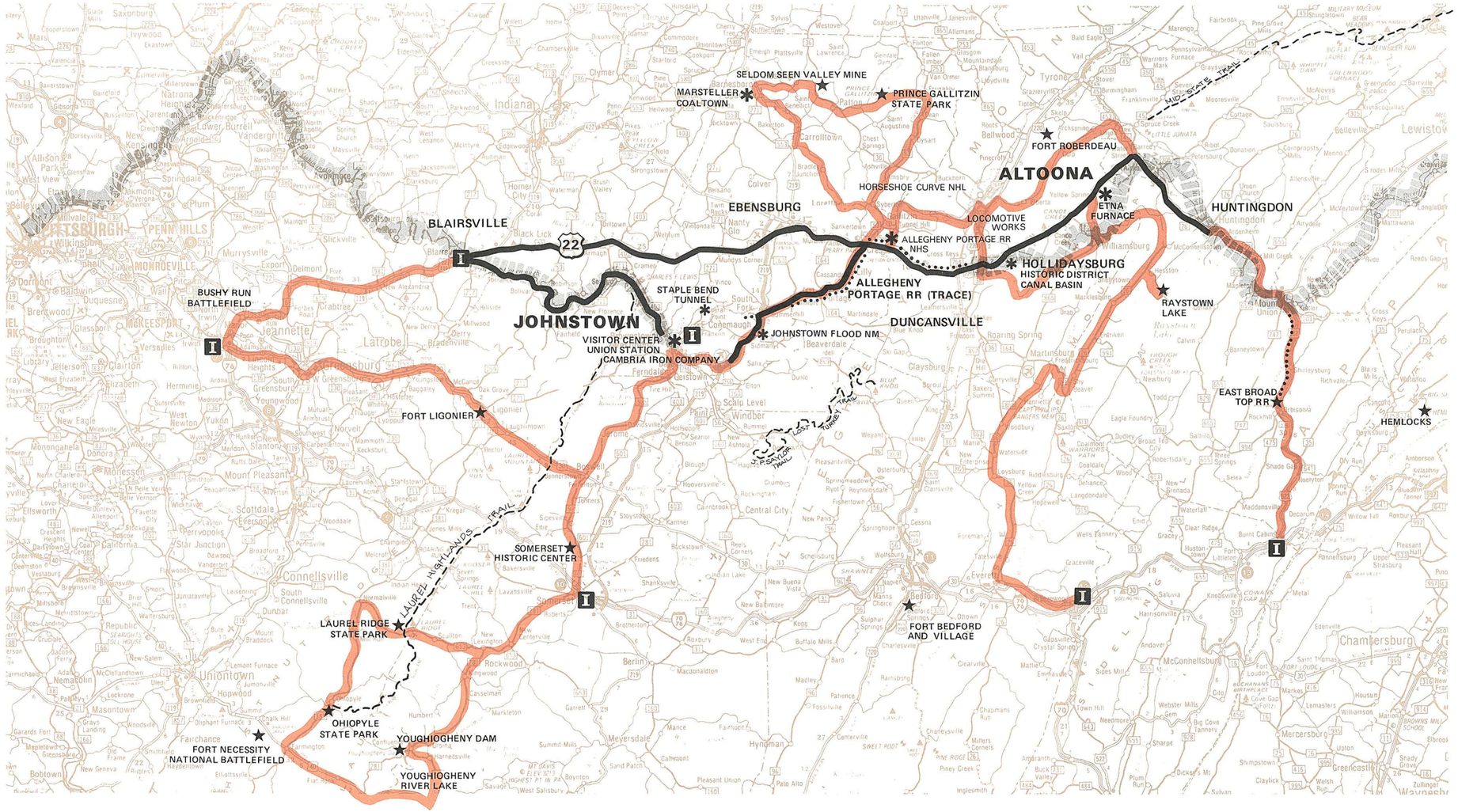
The purpose of any center that is developed should be to attract the interstate traveler off the highway long enough to acquaint him/her with the various visitor opportunities that are available in the southern Allegheny region and to consider devoting some time on this or future trips to explore the area.

Johnstown Visitor Information Center. Union Station in Johnstown could be used as the city's first stop for visitor information and orientation to the important historic sites in the area. Through audiovisual programs, exhibits, maps, and handouts, the center would stimulate further investigation of why this community became a key center in American industry. From the visitor center, the incidents and forces that shaped the area, such as the Johnstown flood, the Johnstown Inclined Railway, the Cambria Iron Company structures at the Bethlehem Steel plant, and other features would be more perceptible.

Cambria Iron Company. Opportunities for the visitor to view, at least from the exterior, the remaining six or more buildings of the Cambria Iron Company are important to the understanding of their significance to the growth of the area's industrial economy.

Cambria Iron Company Office Building. To gain an understanding about the historical evolution of iron and steel making in the Conemaugh River valley, the Cambria Iron Company office building across from the Johnstown Flood Museum would be used as a visitor interpretive center. Historical displays, audiovisual programs, and other interpretive material could be provided, and the center would provide the visitor with a link between past and present.

Bethlehem Steel. No tour or visit to Johnstown would be complete without an understanding of what has evolved in the steel industry, what current technology has done, and what it means to the region and the nation. While the role of steel making may have diminished, major new equipment investments signal that the industry will remain. Modern steel making is fascinating to the visitor and is an education in the tremendous forces that are involved in combining energy and raw materials to produce products most of us take for granted. Some creative way should be found



alternative 4

REGIONAL COOPERATIVE DEVELOPMENT AND PROMOTION

RECONNAISSANCE SURVEY OF WESTERN PENNSYLVANIA ROADS AND SITES

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

- POSSIBLE TOUR ROUTE/TRAIL
- KEY CULTURAL FEATURES
- REGIONAL ATTRACTION
- REGIONAL INFORMATION CENTER
- ALLEGHENY CREST PARKWAY OR SCENIC ROAD (approximate alignment)
- MAJOR TRAIL
- MAIN LINE CANAL

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to allow the Johnstown visitor to view modern steel making and processing. This would complete the regional story of the evolution of industry and show the progress that has taken place since the early days of the iron furnace, canals, and the early railroad.

Staple Bend Tunnel. This important feature of the Allegheny Portage Railroad would be acquired for the Allegheny Portage Railroad National Historic Site under this alternative.

Horseshoe Curve. It is important to complete the story of the Allegheny Portage Railroad by acquainting the visitor with the technology that made it obsolete. The construction of Horseshoe Curve in 1854 represents a most significant site in the advancement of the railroad industry and the rapid obsolescence of the portage railroad. Horseshoe Curve is still used today by Conrail as a main rail line. A separate, adjacent, interpretive site has displays that relate the significance of this engineering feat to the visitor. Under this alternative, the National Park Service could cooperate with the city of Altoona in the development and interpretation of the Horseshoe Curve site. From the Horseshoe Curve site, the visitor could also be directed to the other important area features.

Hollidaysburg. Hollidaysburg is an important link in the portage railroad story. The city was the western terminus of the Juniata Division of the Main Line Canal, and here the canal boats were lifted out of the water, separated, and put on the portage railroad for the trip over the Allegheny Crest. Through an interpretive exhibit or wayside the visitor could better understand how this important link functioned.

Saltsburg. As Hollidaysburg represents the Junianta Division, the community of Saltsburg represents the Western Division of the Pennsylvania Canal. Because the community has approximately 40 structures dating from the canal era, Saltsburg offers the visitor a glimpse of some canal remnants and a chance to appreciate the architecture and history of a canal era community. Visitor use of the area could be achieved by extending the tour route northwest from Blairsville and a trip to the Conemaugh Dam and Reservoir could be included. Inclusion of the Saltsburg community, along with the turning basin at Hollidaysburg, would give the visitor a better understanding of early canal transport.

Altoona Locomotive Works. The historically important Altoona locomotive works is currently a part of the Conrail locomotive repair complex in the northern part of the city and is still used today. Visitors could view current locomotive repair practices and photograph interesting late 19th-century locomotive works buildings.

Scenic Tour Routes. In addition to the transportation corridor study advanced in alternative 3 that would establish a scenic road or parkway along with a trail to link Blairsville, Johnstown, Altoona, and Huntingdon, alternative 4 proposes that tour routes also be developed to complement this major east-west road and provide opportunities for the visitor to see the other regional historic features that do not directly relate to historic sites within Johnstown, Altoona, or along the Allegheny Portage Railroad alignment.

Implementation

The following are recommended actions that identify the responsible group, organization, or governmental entity for implementing the eight specific recommendations under the visitor use section of this alternative.

Visitor Information Centers. The Southern Alleghenies Planning and Development Commission and Laurel Highlands Inc. and their respective travel development units should take the lead in developing these centers. State assistance might also be available through the Bureau of Travel Development to help finance and plan the centers and with advice concerning building content and how information could be displayed. Cooperation with PENNDOT and the Pennsylvania Turnpike Commission would also likely be required regarding interstate signing and vehicular access to the centers. Information centers would be suitable, for example, at the intersection of US 30 and the Pennsylvania Turnpike (I-70 and I-76) and at Somerset (Route 601). Future investigation should also focus on the feasibility of orienting a center toward State College and I-80. The information centers are envisioned as a key element in the regional tourism promotional effort. Perhaps, with an appreciation of the multiple benefits the centers could provide, officials would be receptive to initiating a modest regional lodging tax to fund the construction and staffing of such centers.

Johnstown Visitor Information Center. Under this alternative the National Park Service proposes use of federal funds to acquire and rehabilitate the Union Station. Title to the station would be entrusted to a Johnstown area nonprofit civic or historic group or to the city itself, depending on who would be responsible for staffing and maintenance of the building. (Maintenance costs could be offset by lease payments provided by Amtrack and by possibly leasing out a portion of the station for a restaurant, gift shop, or other appropriate use.) Federal funds would also be made available to the National Park Service, Harpers Ferry Center, to plan, develop, and install appropriate interpretive exhibits and audiovisual programs. Use of qualified volunteers would be encouraged, much like the National Park Service's Volunteers in the Parks program.

Cambria Iron Company. At a minimum a wayside interpretive exhibit should be included as one stop on a Johnstown area tour route. Exterior viewing and an interpretive tour stop wayside could probably be done with a cooperative agreement. If all or a portion of the lower Cambria works is dismantled, the historic Cambria Iron Company buildings should be saved, in cooperation with Bethlehem Steel and local officials, and included in a landscaped park setting or as a centerpiece of a new light industrial park. Saving the buildings would probably best be accomplished through donation or sale to a nonprofit trust or historical society to remove liability and other problems of concern from Bethlehem Steel. Also, some physical separation between the operating plant area and the historic buildings would need to be worked out to eliminate visitor conflicts.

Cambria Iron Company Office Building. The interpretive center that tells the story of the evolution of iron and steel in the valley would best be done by local historical interest groups and national organizations representing the steel industry and steel workers.

Bethlehem Steel. At least four things are required for the visitor to tour an active steel-making mill in Johnstown: company interest, visitor safety, removal of company liability, and finances for setting up a tour and conducting it.

While details cannot be identified here, it is recommended that the nation's steel industry, in cooperation with Bethlehem Steel and local mill management, set up a regular tour schedule for the Johnstown Mill. Tour conductors could be retired area mill workers. A route could be established that would provide for visitor safety, would not be disruptive to current mill operations, and yet would provide the visitor with an appreciation of a working mill. Possibly catwalks above the activity would be appropriate.

Staple Bend Tunnel. The tunnel would be included on a self-guiding walking tour of Allegheny Portage Railroad National Historic Site features.

Horseshoe Curve. Management of the site could be a cooperative venture between the National Park Service and the city of Altoona. The National Park Service could provide advice on interpretive exhibits, signing, and management philosophies.

Hollidaysburg. At a minimum the National Park Service would provide an interpretive display or wayside and signing along the turning basin area just off US 22. Some visitor education/information could also be done in conjunction with the adjacent Hollidaysburg Historic District, which would provide a quality visitor experience in itself. Bed-and- breakfasts and walking tours could be offered by the community to provide for a more complete visitor appreciation of the area. However, the community would also be responsible for any additional interpretation and visitor promotion.

Saltsburg. The National Park Service could extend limited technical assistance, such as planning, land survey, and engineering services from the Mid-Atlantic Regional Office. Until a comprehensive survey of the entire canal system and associated communities is completed, from Harrisburg to Pittsburgh, it would be premature to extend additional assistance to Historic Saltsburg, Inc.

Altoona Locomotive Works. At a minimum the National Park Service would construct an interpretive wayside alongside the complex. The National Park Service should provide the wayside interpretive materials. The Southern Alleghenies Travel Council should provide the signs and include the tour route in pamphlets, and any tours of the complex should be handled by Conrail, with other assistance as requested. Ideally, the existing tours of the complex could be expanded to include the general public and to not only feature current locomotive repair practices but to note the locations and uses of the pre-1900 historic buildings.

Scenic Roads and Tour Routes. If approved, federal funds could be used to match or to fund a transportation corridor study as discussed in alternative 3 and explore the feasibility of additional tour loops. The Southern Alleghenies Travel Council staff, in cooperation with PENNDOT and county public works officials, should be responsible for identifying, signing, and marking the routes. Generally, these tour routes would provide links with a new scenic road or parkway (if deemed feasible), US 22 (William Penn Highway), the Pennsylvania Turnpike, US 40 (the National Road), US

30 (Forbes Road - Lincoln Highway), and other major east-west routes. Selected tour routes would follow existing roads and highways and would be selected to accentuate their scenic qualities and to maximize the opportunities to link numerous historic and recreation sites. Ideally these tour routes would incorporate a loop feature that allows easy access and egress. Where possible these loop routes should also begin at information centers that are established along US 22 or I-70/76 to facilitate visitor access and to provide for a better visitor experience.

FUNDING

As always, funding is a major issue in attempting to organize a new preservation initiative. Sources of potential funding include the federal government, the Pennsylvania State Historic Preservation Office, Bethlehem Steel, Conrail, private trusts and foundations (yet to be identified), local interest groups, and National Park Service technical assistance (in place of outright grants).

STRATEGY FOR ACTION COMMON TO ALL ALTERNATIVES

Vintondale Furnace with Heat Exchanger, Cambria County

STRATEGY FOR ACTION COMMON TO ALL ALTERNATIVES

Regardless of the alternative chosen, an action plan for the preservation, enhancement, and interpretation of the transportation and iron/steel-making themes, as well as other significant resources, could be developed. With the intent of developing separate interpretive facilities for these themes, implementing this action plan would

- identify historically significant elements of the transportation and iron/steel-making themes
- identify public and private uses for these elements
- outline development and management responsibilities for their preservation, enhancement, and interpretation
- identify costs to implement this action plan
- project capital and operating-cost budgets
- identify sources of revenue

An action plan could provide a tool for both Conrail and Bethlehem Steel as they develop future plans for their local properties so that development and/or demolition will not conflict with the preservation and interpretation of these cultural resources.

Successful preparation and implementation of the action plan for the preservation and interpretation of elements of the transportation and iron/steel-making themes in Altoona and Johnstown will have a positive impact on several dimensions of the two communities.

It will lay the groundwork for activities at the various sites that will again contribute to the local economies by attracting tourists.

It will lay the groundwork for improving the visual quality of the environments in these communities so that rather than be considered an eyesore, these features of the transportation and steel industries can continue to be sources of pride for local residents and serve as attractions to prospective newcomers.

By providing Conrail, Bethlehem, and others with a planning tool, there will be a greater likelihood that significant cultural features will survive, reminding residents and visitors why these two towns are here and what the sources of many of their local cultural traditions are.

The project will provide a model for how interests and organizations in two communities can work together to develop preservation plans that address the needs of both, and how this can be accomplished.

SUGGESTED STRUCTURE OF THE ACTION PLAN

I. Introduction

II. Background
- A. Analysis of related projects
- B. Regional socioeconomic analysis
- C. Interpretive resources inventory
- D. Current visitation
- E. Current services and activities
- F. Evaluation of current status
- G. Planned activities

III. Management Plan
- A. Objectives
- B. Opportunities and constraints
- C. Management zones
- D. Management programs
  1. Protection
  2. Investigations
  3. Public uses/interpretation
  4. Operations program
  5. Integrated management
- E. Development sequence
  1. Personnel and equipment
  2. Development map
  3. Development calendar
- F. Feasibility

IV. Executive Summary

It is premature to suggest the creation of one combined organization or separate group in each community to develop and implement action plans for cultural resource preservation. A number of groups and organizations could, with sufficient technical and financial support, initiate the process. These include the Johnstown Flood Museum, Blair County Historical Society, Cambria County Historical Society, Altoona Railroaders' Memorial Museum, Southern Alleghenies Planning and Development Commission, the National Park Service, local chambers of commerce, preservation groups, and others.

ESTIMATED COSTS OF COMPLETING ACTION PLAN (BY ALTERNATIVE)[1]

Alternative 1

Resource evaluation[2]	$100,000
Individual site planning/coordination[3]	75,000
	$175,000

Alternative 2

Resource evaluation[2]	$100,000
Bicounty intergovernmental planning/ coordination[3]	100,000
	$200,000

Alternative 3

Resource evaluation[2]	$100,000
Bicounty intergovernmental planning/ coordination[3]	100,000
Transportation corridor study	150,000
	$350,000

Alternative 4

Resource evaluation[2]	$100,000
Regionwide intergovernmental planning/ coordination[3]	180,000
Transportation corridor study	150,000
	$430,000

[1]Estimated costs do not include costs for any design, construction, land acquisition, or staffing costs that would be associated with the development of any alternative.

[2]These include Historic American Engineering Record Surveys, preparation of National Register forms, and historic resource studies for several principal resources groups contained in the alternative.

[3]Appropriated funds would be distributed proportionately to the various local, state, and federal jurisdictions involved based upon the extent of their participation.

APPENDIXES

Etna Furnace, Ironmaster's Residence, Mt. Etna, Blair County

APPENDIX A:
DEPARTMENT OF INTERIOR AND RELATED AGENCIES APPROPRIATIONS ACT, PUBLIC LAW 98-738

House of Representatives Report No. 98-886, page 24, June 29, 1984, which relates to legislative history of Public Law 98-473.

"An increase of $70,000 is recommended to study roads in Pennsylvania in the area of Johnstown Flood NM and Allegheny Portage RR NHS for consideration as Parkways. The study should include Routes 30, 23, and 220 but not be limited to those. The Committee expects the study to be completed within two years."

APPENDIX B:
CULTURAL RESOURCES PROGRAMMATIC ASPECTS

SURVEYS

Cultural resource survey work differs depending upon which county is under consideration. Cambria has been extensively surveyed and a multivolume report was printed in 1981 by the Cambria County Redevelopment Authority. The survey contains a great deal of information about architectural properties in the county but not much data about the coal or steel industry. The report concludes with recommendations for additional listings of historic districts on the National Register. The 14 proposed districts follow:

Blandburg Historic District
Carrolltown Historic District
Center Street Historic District
David Street Historic District
Julian Street Historic District
Loretto Historic District
Mill Creek Historic District
Nicktown Historic District
Revloc Historic District
South Fork Hunting & Fishing Club Historic District
St. Augustine Historic District
Terra Cotta Historic District
Old Westmont Historic District
Wilmore Historic District

The survey also recommended three historic district proposals in Johnstown:

- Central Business Historic District
- Kernville Historic District
- Moxham Historic District

Blair County has not completed its cultural resources survey as of this printing. Similar surveys have been conducted and published for Westmoreland, Bedford, and Huntingdon counties. Somerset's first draft will be released mid-summer 1985, with an evaluation of several thousand structures and sites.

The extent of Historic American Buildings Survey (HABS) and Historic American Engineering Record (HAER) fieldwork in the two counties is unknown due to the lack of easily retrievable data. HABS drawings have been prepared for the Skew Arch Bridge (Blair County) and Samuel Lemon House and Staple Bend Tunnel (Cambria County). These three sites are affiliated with the Allegheny Portage Railroad. Similar drawings exist for a number of steel industry properties near Pittsburgh. A HAER official in Washington has indicated that no plans exist for survey and evaluation fieldwork in western Pennsylvania because of changing priorities and scarcity of funds.

APPENDIX C:
NATIONAL REGISTER PROPERTIES

CAMBRIA COUNTY

Ebensburg, Philip Noon House

Johnstown, Cambria Public Library Building (Carnegie Library Building), Johnstown Flood Museum

____, Johnstown Inclined Railway

____, Nathan's Department Store

Johnstown vicinity, Allegheny Portage Railroad National Historic Site

____, Johnstown Flood National Memorial

BLAIR COUNTY

Altoona, Baker Mansion

____ , Charles B. Dudley House

____, Mishler Theatre

____, U.S. Post Office (eligible)

____ , vicinity, Horseshoe Curve NHL

Culp vicinity, Fort Roberdeau

____ , St. John's Evangelical Lutheran Church

Hollidaysburg, Blair County Courthouse

____ , Highland Hall

Williamsburg vicinity, Etna Furnace

____ , Daniel Royer House

BEDFORD COUNTY

Covered Bridges of Bedford County Thematic Resources

Bedford vicinity, Bedford Historic District

____ , Russell House

____ , Bonnet's Tavern

____ , Barclay House

____ , Espy House

Everett vicinity, Juniata Woolen Mill and Newry Manor

New Enterprise vicinity, New Enterprise Public School

Site 36BD90

FULTON COUNTY

Burnt Cabins, Burnt Cabins Gristmill Property

McConnellsburg, Fulton House

____ , McConnell House

HUNTINGDON COUNTY

Allenport vicinity, Lewis Smalley Homestead

Marlesburg vicinity, Brumbaugh Homestead

Orbisonia vicinity, St. Mary's Covered Bridge (Shade Gap Covered Bridge)

Rockhill Furnace, East Broad Top Railroad

Shirleysburg, Benjamin B. Leas House

INDIANA COUNTY (partial listing)

Robison and vicinity, Western Division of the Pennsylvania Main Line Canal

SOMERSET COUNTY

Addison, Petersburg Tollhouse

Covered Bridges of Somerset County Thematic Resources

Meyersdale vicinity, W. Bollman and Company Bridge

WESTMORELAND COUNTY

Greensburg, Gen. Greene Hotel

Harrison City vicinity, Bushy Run Battlefield

Irwin vicinity, Fullerton Inn

Ligonier, Fort Ligonier Site

New Florence vicinity, Laurel Hill Furnace

____ , Squirrel Hill Site

Torrance vicinity, Western Division, Pennsylvania Main Line Canal (Conemaugh River Lake)

United vicinity, Sewickley Manor

Vandergrift, St. Gertrude Roman Catholic Church

West Newton, Plumer House

Youngstown vicinity, Kingston House

Yukon vicinity, Bells Mills Covered Bridge

APPENDIX D:
STEEL AND RAILROAD INDUSTRY PRESERVATION IN OTHER AREAS

Elsewhere action has occurred to preserve and interpret remnants of the iron and steel industry. The city of Birmingham, Alabama, now manages the Sloss Iron Furnaces, a 30-acre site with two 7-story blast furnaces and several ancillary structures built in 1927. The city has allocated $4.5 million to open the donated site to public use and enjoyment but will give no more funds for capital improvements. The city will continue to allocate $350,000 annually for operating expenses, and the site has a small endowment. Preservation and interpretation are the mission at this site. The former iron complex serves as a downtown focus and community center where there are several activities and special events. The property is on the National Register as a national historic landmark. During its first year of operation (two days a week) 45,000 visitors toured the site, and 100,000 are expected this year. High, ongoing maintenance costs at this industrial complex seem to be the major issue in 1985.

Youngstown, Ohio, has followed a different path. There early plans to preserve a steel mill were abandoned several years ago, but the state assisted with a $3.8 million appropriation to construct the Youngstown Industrial Museum in conjunction with Youngstown State University. This large structure will interpret the city's various industrial enterprises. The Ohio Historic Society will operate the facility when completed.

Thus in at least two instances former iron and steel centers are interpreted one through state assistance and

the other by a city government aided by a grassroots coalition of community interests.

In spring 1985 U.S. Steel and the National Trust for Historic Preservation commissioned a $90,000 marketing study of the 170-acre Joliet works in Joliet, Illinois. According to a National Trust official the "goal of the study is to create jobs and businesses while preserving historical structures. This could serve as a model for hundreds of historic sites throughout the nation" (Chicago Tribune, May 28, 1985). U.S. Steel has indicated they would consider any plan developed through the study, including converting the property to retail, industrial, residential, or recreational use. The marketing study will be completed in late 1985.

There are a number of transportation museums scattered around the nation. They include a state facility located at Strasburg, Pennsylvania; local museums in St. Louis, Missouri, and Golden, Colorado; and a major facility in Sacramento, California. One of the more innovative complexes is in process of development at Spencer, North Carolina. There the state Division of Archives and History is developing a multimillion-dollar North Carolina transportation museum on the site of the Southern Railroad's nationally significant Spencer shops. The 57-acre site contains 11 major buildings with 1 million feet of floor space, which were donated to the state by the railroad. Presently 6,000 square feet of exhibits are open to the public. The state has allocated $2.5 million, with an additional $8-10 million needed to complete the project.

SELECTED BIBLIOGRAPHY

BOOKS

ALEXANDER, EDWIN P.
1947 *The Pennsylvania Railroad: A Pictorial History.* New York: Bonanza Books.

ANDERSON, NILES
1975 *The Battle of Bushy Run.* Harrisburg: Pennsylvania Historical & Museum Commission.

BERGER, KARL, ed.
1984 *Johnstown: The Story of a Unique Valley.* Johnstown: Johnstown Flood Museum.

BURGESS, GEORGE H., AND MILES C. KENNEDY
1949 *Centennial History of the Pennsylvania Railroad Company.* Philadelphia: The Pennsylvania Railroad Company.

EMERSON, ROBERT L.
1984 *Allegheny Passage: An Illustrated History of Blair County.* Woodland Hills: Windsor Publications, Inc.

GABLE, JOHN E.
1926 *History of Cambria County Pennsylvania.* Vol. 1. Topeka-Indianapolis: Historical Publishing Company.

JACOBS, HENRY A.
1941 *The Juniata Canal and Old Portage Railroad.* Hollidaysburg: Blair County Historical Society. Reprinted 1969.

LEWIS, W. DAVID
1976 *Iron and Steel in America.* Greenville, Delaware: The Huzley Museum.

MCHUGH, JEANNE
1980 *Alexander Holley and the Makers of Steel.* Baltimore & London: The Johns Hopkins University Press.

MULKEARN, LOIS, AND EDWIN V. PUGH
1954 *A Traveler's Guide to Historic Western Pennsylvania.* Pittsburgh: University of Pittsburgh Press.

SHANK, WILLIAM H.
1965 *The Amazing Pennsylvania Canals.* York: The Historical Society of York County.

SHARP, MYRON B., AND WILLIAM H. THOMAS
1966 *A Guide to the Old Stone Blast Furnaces in Western Pennsylvania.* Pittsburgh: The Historical Society of Western Pennsylvania.

SWETHAM, GEORGE, AND HELEN SMITH
1976 *A Guidebook to Historic Western Pennsylvania.* Pittsburgh: University of Pittsburgh Press.

WALLACE, PAUL A.W.
1965 *Indian Paths of Pennsylvania.* Harrisburg: The Pennsylvania Historical and Museum Commission.

WESTERN PENNSYLVANIA HISTORICAL SOCIETY
1938 *Guidebook to Historic Places in Western Pennsylvania*. Pittsburgh: University of Pittsburgh Press.

WOLF, GEORGE A.
1945 *Blair County's First Hundred Years: 1846-1946*. Altoona: The Blair County Historical Society.

PUBLIC DOCUMENTS

BEDFORD COUNTY PLANNING COMMISSION
1983 *Bedford County Historic Sites Survey Final Report*. Bedford.

BLAIR COUNTY PLANNING COMMISSION
1979 *Update to General Existing Land Use and Housing Units*. Holiidaysburg, Pennsylvania.

BUREAU OF OUTDOOR RECREATION, U.S. DEPARTMENT OF THE INTERIOR
1975 *The Kittanning Path*.

CAMBRIA COUNTY PLANNING COMMISSION
1976a "Analysis of Historic Preservation: A Plan for Cambria County." Ebensburg.

1976b *Cambria County Inventory of Historical Sites*. Ebensburg.

1980 *Land Use Print-Out of Cambria County Assessment Records*. Johnstown, Pennsylvania.

CAMBRIA COUNTY REDEVELOPMENT AUTHORITY
1981a *Cambria County Historic Site Survey: A Review of the County's Built Environment*. Ebensburg.

1981b *Johnstown's Historic Site Survey: A Review of the County's Built Environment*. Ebensburg.

COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL RESOURCES
1981 *Pennsylvania's Recreation Plan 1980-1985*. Harrisburg, Pennsylvania.

1982 *The Economic Significance of Recreation in Pennsylvania*. Harrisburg, Pennsylvania.

NATIONAL PARK SERVICE, U.S. DEPARTMENT OF THE INTERIOR
1973 National Register of Historic Places Inventory, Nomination Form for Etna Furnace.

1980 *Final General Management Plan - Allegheny Portage Railroad NHS and Johnstown Flood NM.* Denver, CO.

1982 *History and Prehistory in the National Park System and the National Historic Landmarks Program*. History Division, Washington, D.C.

1983 *Historic America*. Historic American Building Survey/Historic American Engineering Record. Washington, D.C.

1985 *Central Pennsylvania Tourism Opportunity Analysis*. Office of the Special Assistant to the Director (Tourism), Washington, D.C.

PENNSYLVANIA STATE DEPARTMENT OF TRANSPORTATION

1980 *Pennsylvania Trail Guide*.

SOUTHERN ALLEGHENIES PLANNING AND DEVELOPMENT COMMISSION

1980 *1980 Census Data*. Southern Alleghenies Information Network. Altoona, Pennsylvania.

1984 *Southern Alleghenies Marketing Plan for Travel Development FY 85*. Altoona, Pennsylvania.

1985 *Southern Alleghenies 1985 Group Tour Planning Manual*. Altoona, Pennsylvania.

UNPUBLISHED DOCUMENTS

SHAPPE, NATHAN D.

1940 "A History of Johnstown and the Great Flood of 1889: A Study of Disaster and Rehabilitation." Ph.D. dissertation. University of Pittsburgh.

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