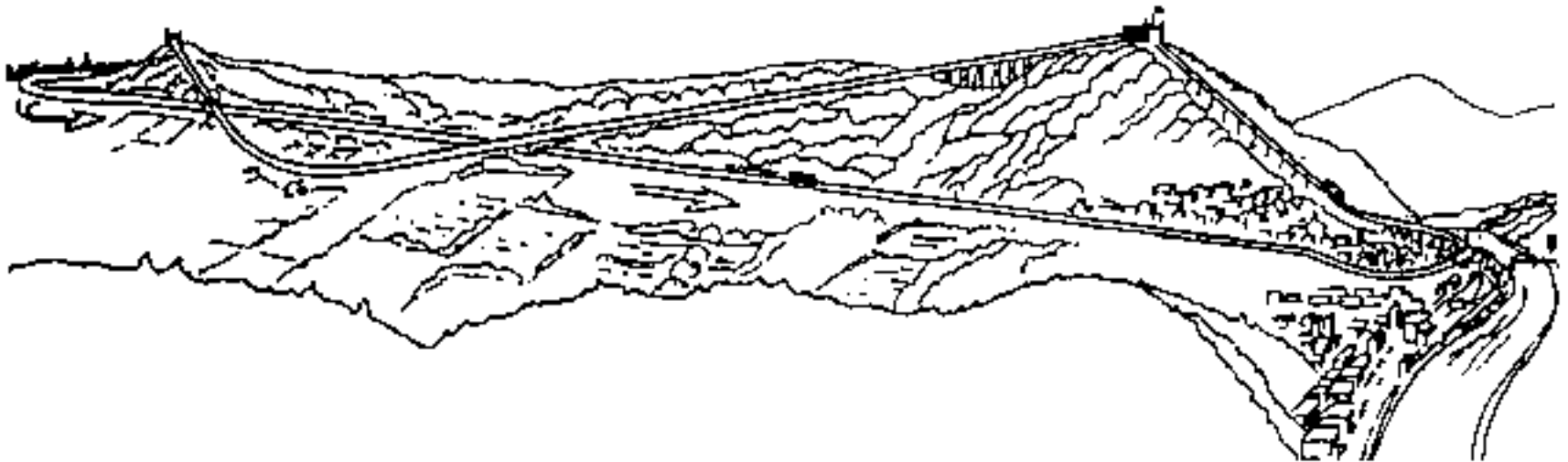


# **Switchback Gravity Railroad Historic Landscape Preservation Planning Study**

**Graduate Program in Historic Preservation  
School of Design  
University of Pennsylvania**



# Acknowledgements

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*All photographs included in this report are courtesy of the UPenn Switchback Gravity Railroad study team, unless otherwise noted.*

*Cover image courtesy of Mauch Chunk Museum.*



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# Executive Summary

This report summarizes the results of a preservation planning study of the Switchback Gravity Railroad (SGRR) undertaken in 2007 by University of Pennsylvania graduate students and faculty, in partnership with the Delaware & Lehigh National Heritage Corridor, the Switchback Gravity Railroad Foundation, and the National Park Service.

The study investigated all aspects of the site's value, especially its history and cultural significance; assessed current resources, opportunities and constraints; and identified an appropriate set of actions to ensure both the preservation of the historic and natural resources of the SGRR as well as its continuing use as a recreational site. As part of the project, the team reviewed the feasibility of a proposal made by the Switchback Gravity Railroad Foundation for the creation of a funicular railway on part of the site. The findings and research presented in this report reflect the recommendations of the University of Pennsylvania team, based on extensive research and discussion with the community and partner organizations. The findings do not represent the independent positions of all partners contributing to the project.

Based upon substantial research, detailed analysis and public input, the study reinforced the conclusion, drawn by others over the years, that the SGRR landscape—the entire collection of physical remains, rights-of-way, surrounding territory, and historical narratives attached to the railroad's influence on the development of Jim Thorpe-Summit Hill area—is a highly significant cultural resource, demanding the most careful historic preservation attention. The study further determined that the most appropriate course of action for the Switchback Gravity Railroad is the preservation of the existing resources and the improvement of existing infrastructure providing access and interpretation for the public. These recommendations include the stabilization of historic ruins, natural resource protection, improved maintenance, interpretation, continuation of the trail's multi-use function, and the implementation of a more cohesive management plan and structure.

Construction or development on the site that would damage existing historic and natural resources and/or cause disruption to the surrounding community is not recommended. While the study recognizes the potential economic benefits of attracting greater numbers of visitors by developing the SGRR more intensely as a tourist draw, the benefits of protecting the integrity of the SGRR as an historic landscape of high public value should take precedent and may offer even greater social and economic benefit in the long run. A proposal to build a funicular on the Pisgah Plane is not advocated; there are alternative ways to enhance, interpret and provide public access to the site. A number of alternative and acceptable preservation actions for the SGRR are proposed. They can be used by the managers, owners and others who care deeply about the Switchback Gravity Railroad to preserve this unique resource's place at the heart of the region's history and contemporary life.

For more information on this study, please contact the Delaware & Lehigh National Heritage Corridor (<http://www.delawareandlehigh.org/>) or the University of Pennsylvania's Graduate Program in Historic Preservation (<http://www.design.upenn.edu/historic-preservation>).

Mount Jefferson plane  
constructed for backtrack  
(Mauch Chunk Museum)



# Introduction

The Switchback Gravity Railroad was an 18-mile transportation system, roughly a figure-eight in plan, created in the 1820s to connect the anthracite coal fields around Summit Hill to the town of Mauch Chunk (later renamed Jim Thorpe), where coal could be shipped down the Lehigh River to markets in Philadelphia and beyond. This region is located in Carbon County within the Pocono Mountain Region of northeastern Pennsylvania, approximately 80 miles north of the City of Philadelphia. The remains of the railroad lie within the Mauch Chunk Ridge Barrens, a forested region bordered by the Lehigh River to the east, the borough of Jim Thorpe to the south, Summit Hill to the west and Nesquehoning to the north. Of particular importance to the scope of this project, the town of Jim Thorpe is situated southeast of the base of the Mt. Pisgah Plane, the easternmost part of the entire 18-mile Switchback Gravity Railroad.

Increased interest in preservation of industrial heritage and developing the tourism industry has led local historians, civic leaders, business groups, and officials—as well as agencies such as the Delaware & Lehigh National Heritage Corridor and National Park Service—to focus preservation and planning efforts towards the Switchback Gravity Railroad. The SGRR is among a rare class of places that bear a high level of historic significance—creation of the SGRR influenced the development of this whole region mightily—while also helping make the region an attractive place for tourists to visit. As the subject of academic study and preservation practice, this site is of particular interest because of the multiple stakeholders strongly invested in the outcome of this study as well as the dynamic economic, social and political relationships between tourists and residents.

The goal of this study is charting a long-term vision for the Switchback Gravity Railroad by understanding the values ascribed to the site and its landscape. The recommendations are based on understanding the evolving and complex layers of the site thoroughly, while squaring the historic values with the contemporary needs and desires of the existing community. This document reports on the research undertaken to inform these recommendations, and suggests both short-term and long-term actions that respect and preserve the historic remains while adapting to the shifting needs and interests of the public. Recognizing the complex and multilayered history of the site is a necessary step toward determining the most appropriate response, today and in to the future.

Values-centered preservation planning is a disciplined, thorough, and transparent way of collecting and analyzing information to inform the decision-making. It allows preservation professionals to handle complex problems, factor in the views of many stakeholders, and plan for both the long-term and the near-term.

Values-centered preservation plans requires the involvement of a wide range individuals and groups with a vested interest in the site, as well as experts and officials. This project used such an approach to guide efforts to research, consult on, and recommend decisions for the important historic landscape defined by the Switchback Gravity Railroad.



Drawing depicting tourists riding the Switchback with the Mules for pulling the cars in back (Mauch Chunk Museum)



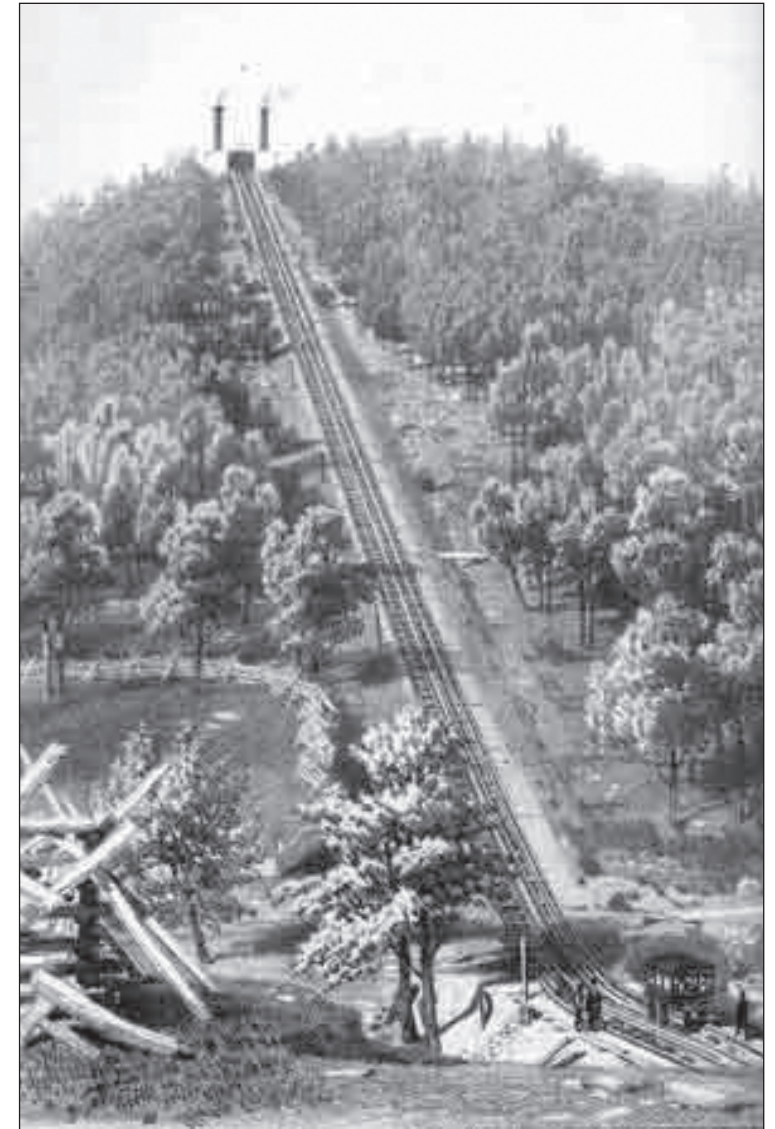
## Statement of Significance

The first railroad in Pennsylvania and the second railroad in the country (created in 1827) the Switchback Gravity Railroad is a significant piece of American industrial history. The Switchback was an integral part of the anthracite economy of northeast Pennsylvania, which helped to fuel the Industrial Revolution in the northeast by providing coal to the cities of Philadelphia and New York. The SGRR evolved over time, from a simple system of wheeled cars propelled by animals and gravity to include groundbreaking technology including backtracks and traction systems moving coal from mine to market. The SGRR sparked development of the anthracite coal industry, which transformed this region, leading to the founding of Mauch Chunk (today known as Jim Thorpe) and numerous other coal-mining-centered communities.

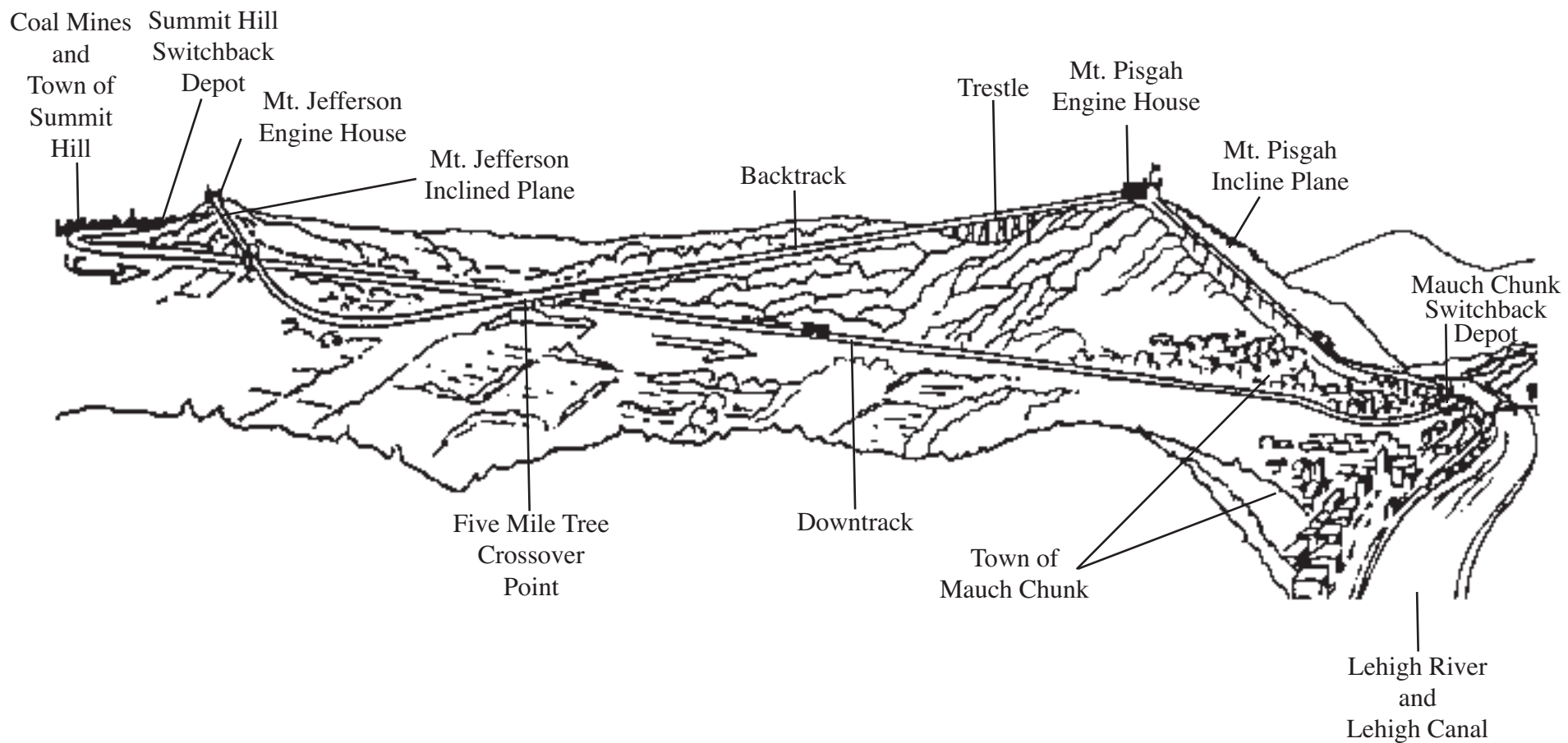
The Switchback Gravity Railroad also figured in the development of the region's tourism economy in the 19th century. The SGRR was the precursor of the rollercoaster as a part of American leisure culture. Not only used to haul coal, the railroad also operated as a "pleasure carriage," becoming the first passenger carrier in the country, sometimes attracting more than 100,000 visitors in a season—when the area's beauty was touted as "the Switzerland of America." The railroad was abandoned in the 20th century; its parts were sold as scrap during the Great Depression, though the rights-of-way and some of its structures remained in place.

Today, the Switchback is used as a recreational trail and an historical monument by local residents, as well as tourists. Generations of residents and visitors have used the 18-mile loop for recreational activities such as hiking, biking, hunting, and cross-country skiing. Its scenic viewsheds and location within the Pocono Mountains continues to make the area a popular tourist location bringing in visitors year round. The SGRR is listed on the National Register of Historic Places and the Pennsylvania Inventory of Historic Places, and is located within the Delaware & Lehigh National Heritage Corridor. While all that remains of its past is the right-of-way, and various ruins, the SGRR's significance lies in its historic landscape and national contribution to industrial heritage and the history of tourism.

Mount Pisgah Plane, 1844  
(Mauch Chunk Museum)







Sites of significance along the Switchback Gravity Railroad

# Research

This study began with a series of research-related tasks aimed at building a base of information about the history, contexts and current conditions of the SGRR. The group was divided into teams and organized according to the following tasks:

## *Historical Research and Evolutionary Diagrams*

Historical research of the Switchback Gravity Railroad's development, growth and use, as well as the history of the area was conducted in order to inform the team about the significance of this site. The History team consulted a number of sources, both primary and authored texts and compiled a timeline and narrative summarizing the key dates and events, which defined the railroad's existence. Members of the team also visited the Mauch Chunk Museum, Dimmick Memorial Library, and Carbon County Archives. Particular attention was paid to the growth and evolution of both the railroad and the adjacent community that grew around it.

## *Mapping and Site Survey*

In order to comprehend the full extent of the site, the team conducted a site survey and utilizing hand-held GPS units collected data to create a map of the Switchback Trail. Working with GIS software, the mapping team created a base map of the site, which was further utilized to map other aspects of the site, all of which formed important aspects of the whole study as well as students' individual projects on particular issues including: sites of significance, ruins and their conditions, ownership along the trail, and zoning data, all of which would form important segments of both the midterm and final report, as well as inform individual projects.

## *Present Context*

Other research focused on the present context in which the Switchback site exists. This included consulting census data, tourism and socio-economic information, ownership parcels, zoning data, and historic designations. This information allowed to the studio group to chart the overall growth and decline of Jim Thorpe and Carbon County over the previous decades and allowed for a greater understanding of the social demographics.

Mount Pisgah Plane, c.1868-1885  
(New York Public Library)



# Research

## *Comparables*

The comparables research identified sites with similar history, conditions, and issues as the Switchback Gravity Railroad. These sites included other non-functioning railroads, rails-to-trails sites, industrial heritage sites, funiculars, similarly sized towns with an industrial background, and outdoor recreation trails. From this information, the comparables team was able to make educated analysis as to what effect future development of the Switchback Gravity Tailroad site might have on the site's historic fabric, natural resources, and surrounding community.

## *Public Involvement*

The team developed questionnaires to gather data regarding public perceptions and opinions about the site. Teams conducted surveys on the street in the downtown Jim Thorpe area, as well as a door-to-door canvassing of residents in the Heights neighborhood.

## *Stakeholder meetings*

A number of meetings were held in and around Jim Thorpe to gather opinions and feedback from individuals and groups affected by any possible changes to the site, and those who are responsible for the site's maintenance. These meetings were held to understand how people value the SGRR and to address the proposal by the Switchback Gravity Railroad Foundation to design and construct a funicular rail system on top of the Pisgah Plane. Teams of students met with these stakeholders along with John Drury from the Switchback Gravity Railroad Foundation and Dale Freudenberger from the Delaware and Lehigh National Heritage Corridor in order to voice their concerns over any possible development to the site. In addition, representatives from the team attended a public meeting in Jim Thorpe on December 6, 2007, conducted by the Delaware and Lehigh National Heritage Corridor. This town hall style meeting allowed residents who had not previously been interviewed by students to voice their concern or approval over work conducted during the course of the semester.



Pleasure Carriages, 1924  
(Mauch Chunk Museum)

## Research - Site History

The Switchback Gravity Railroad site is a multilayered landscape incorporating both the natural environment and industrial heritage. The following is a comprehensive narrative of the key events that shaped its evolution. Included are a historical narrative, technical description of how the railroad functioned and a timeline which highlights significant events in the railroad's history.

### *Switchback Gravity Railroad Historical Narrative*

The original inhabitants of what is now called Jim Thorpe, the Lenape Native Americans were a hunter-gatherer tribe living in the lower Hudson River, Delaware River, and western Long Island Sound.<sup>1</sup> However, the Lenape were forced to leave the area between 1783-1868, migrating to Ohio, Oklahoma, New York and Canada.<sup>2</sup>

European settlement in the area began in the 1700s shortly before the Lenape migration and introduced industry to the area. In 1791, Philip Ginder discovered anthracite coal on the summit of Sharp Mountain, between the Lehigh and Little Schuylkill Rivers.<sup>3</sup> He informed his friend and neighbor Colonel Jacob Weiss, a businessman with strong connections in Philadelphia; the two formed a partnership on February 21, 1792, that resulted in the formation of a joint-stock company called the Lehigh Coal Mine Company (LCMC).<sup>4</sup> Mining of anthracite coal boomed in the Mauch Chunk region, but the transportation of the coal proved to be difficult and the LCMC had no means of transporting their product to potential clients. Difficulties persisted and in 1798 the company began leasing their lands to anyone willing to attempt transportation.

This offer caught the attention of Josiah White, a mechanical expert and entrepreneur who had an established interest in anthracite coal. In January of 1818, White and his partners, George F.A. Hauto and Erskine Hazard leased the coalfields from LCMC for twenty years at a yearly rental of one ear of corn, during which they were required to deliver at least 40,000 bushels of coal to Philadelphia.<sup>5</sup> The following years saw tremendous growth and innovation under White's direction. White formed two companies to manage the business of mining and transportation -The Lehigh Coal Mine and The Lehigh Navigation Company<sup>6</sup>.

Interestingly, stockholders chose to invest in the Lehigh Navigation Company over the Coal Mine due to financial incentives. Increased funds in the Lehigh Navigation Company allowed for great improvements in transportation. By 1819, White had constructed a continuous road with no undulation to haul coal wagons over Summit Hill. Flooding briefly derailed this progress. The ensuing financial difficulties led White to dissolve his two companies into the singular Lehigh Navigation and Coal Company.<sup>7</sup> Problems continued and in 1822 the company was incorporated into the Lehigh Coal and Navigation Company (LC&N). Once the financial crisis subsided, White turned his attention towards constructing a gravity railroad to enhance



1870's Tourism Poster (Hydro)



## Research · Site History

the transportation system. His plan was submitted to the board in 1826 and the railroad was completed by 1827.<sup>8</sup> The Miner's Journal referred to the completed railroad as the "Lion" of the day, which "attracted an uncommon number of visitors from all parts of the country."<sup>9</sup> In addition to these foreign visitors, wealthy investors of the LC&N frequently visited the area and were counted among the first tourists. Beginning in 1829, travelers experience the Switchback in a "Pleasure Carriage."

The LC&N leased rights to private individuals to operate these carriages, taking half of the proceeds. The first operator was Joseph Lippincott. Passengers began their voyage in the upper part of Mauch Chunk, just before the railroad ended at the chutes.<sup>10</sup> Innovation continued, and in 1829 the LC&N formally announced the extensive discoveries of coal and their planned entry into Panther Valley.<sup>11</sup>

As the 1830s drew to a close, coal production had increased enough that the Lehigh Coal and Navigation Company had to cancel passenger service on the railroad because it was interfering with coal traffic.<sup>12</sup> This situation was to take a dramatic turn of events only six years later. Over-expanded production and transportation facilities created intense competition within the anthracite coal industry and many companies struggled to remain profitable. The death knell for the industry sounded in the twentieth century.<sup>13</sup> An over-supply of coal now glutted the market. Early questionable financial practices to raise capital for new construction projects had placed the LC&N in a vulnerable position. On June 10, 1844 the board was informed that the company had to drastically increase coal production or face financial ruin as it labored under heavy debt.<sup>14</sup> Josiah White submitted plans for the construction of a Backtrack that would use steam power instead of water in order to increase coal production.



Two days later the board unanimously resolved:

"that a Return Track from the landing at Mauch Chunk to the great and Summit Mines, be constructed with all convenient dispatch; the said track to operate by gravity: the empty cars at the landing, and upon the road, and the loaded cars near to the mines, to be raised to the necessary elevation by means of stationary engines..."<sup>15</sup>

In September of 1844 the LC&N placed an order with John Fatzinger of the company foundry for a single steam engine to be built on Mount Pisgah. In 1846 the Backtrack was placed into service using the same "kickback" switches installed in earlier sections of the railroad. With passenger service resuming, the term "switchback" caught the fancy of tourists. Eventually the whole of the LC&N gravity railroad from Mauch Chunk to Summit Hill and the Company's mines came to be known by that name.<sup>16</sup>

To fully use the newly constructed Backtrack, the company would have to find new sources of coal. In preparation for the coal production expansion, the LC&N constructed the company's first mechanized coal breaker at Summit Hill, which later came to be known as "Old Crackers."<sup>17</sup> Renovations began on the railroad in 1848 including rebuilding four miles of the original system. In April of 1850 a second return Backtrack, known as the "new" switchback, was completed.<sup>18</sup>

## Research - Site History

The mid to late 1850's saw increased tourist travel to Mauch Chunk due to the completion of the Lehigh Valley Railroad that extended from Easton to Mauch Chunk. Although the completion between the railroad and Lehigh Navigation resulted in reduced tolls on the canal, the LC&N had foresight enough to realize that the new railroad would bring increased business and travelers to the town of Mauch Chunk.<sup>19</sup>

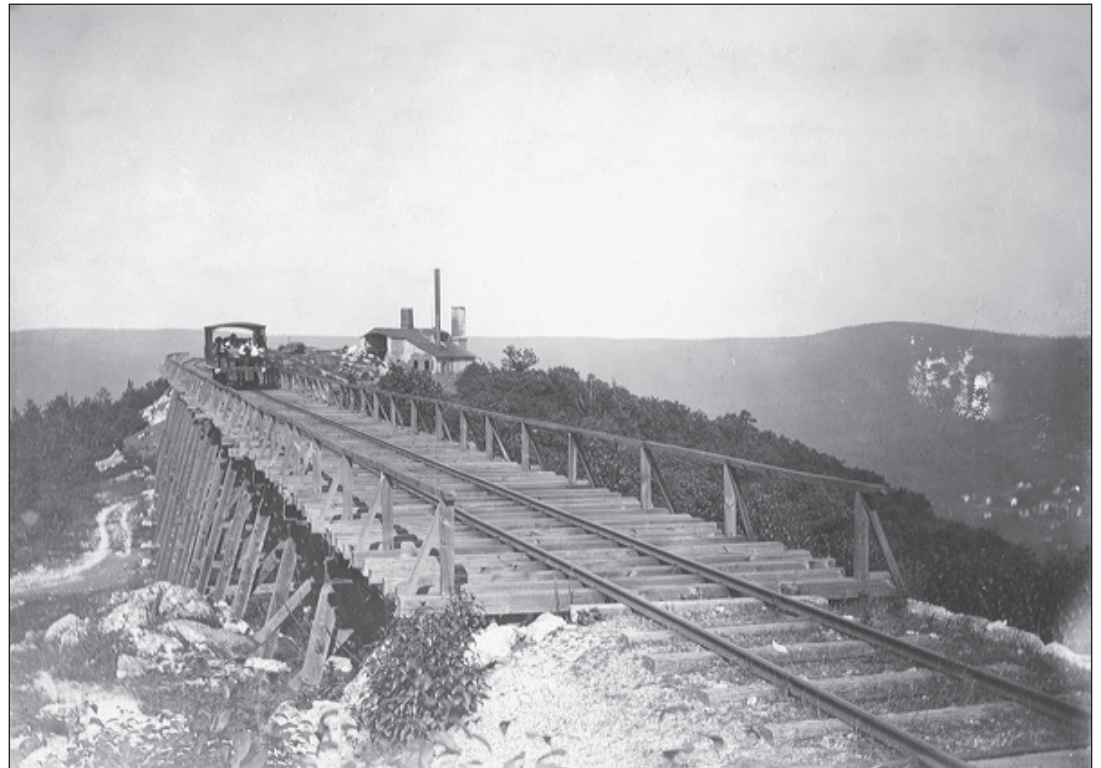
The 1860s was a decade of technological advancements. In Springville the Lehigh Coal and Navigation Company eliminated the need for switches, replaced the old propellers and water turbines with steam engines, and for the first time ever completed a railway that expanded the entire length of the Panther Valley, dramatically increasing the amount of visitors to the area.<sup>20</sup> New advancements continued in 1862 when the upper section of the Lehigh Navigation system was abandoned and replaced by railroad transportation as a result of extensive damage incurred from the great flood of that year. The LC&N also contracted the excavation of tunnel number 10, which linked the coal mines to the greater regional coal deposit of the Mammoth Vein in 1863. As the implementation of new technology continued, John Leisenring Jr., then the superintendent of the LC&N, proposed to abandon the archaic inclined planes in favor of replacing gravity with locomotive power. By 1865 locomotive power was in use.<sup>21</sup>

In the 1870s the coal crisis hit Carbon County. In Carbon County the demand for anthracite coal was at an all time low and the LC&N was forced to shut down the chutes and close the gravity railroad. Unable to avert financial ruin, the LC&N sold the Switchback and all materials related to the railroad to the New Jersey Central Railroad for \$75,242.12 in 1874.<sup>22</sup> Two years following the sale, the final

coal car passed over the Mauch Chunk Railroad, and economic hardship brought labor strikes to the area. Uncertainty in the mining industry served as a catalyst for the Molly Maguires' reign of terror, which resulted in the murder of mine superintendents Frank Langdon and John P. Jones.<sup>23</sup>

Despite economic uncertainty during the coal depression, the Switchback boomed as a tourist attraction. Visitors enjoyed moonlit rides and the addition of two new attractions, the burning mine and the ice cave. The only major dip in tourist numbers between the 1870s and 1880s occurred during the Molly Maguires' trial.<sup>24</sup> However, once the trial ended in 1877, visitors began to return to the area, and the Switchback was reborn as a tourist mecca, under the management of the Mumford Brothers.<sup>25</sup> In 1883 the Philadelphia and Reading Railroad leased the New Jersey Railroad, and as a result the Switchback fell under the control of the Philadelphia and Reading Railroad.<sup>26</sup> Throughout the 1880's the Switchback enjoyed record high attendance, with 1885 recording 100,000 visitors for the season.<sup>27</sup>

Backtrack circa 1846 (Hydro)



## Research · Site History

On July 4, 1885, a horrific accident occurred on the Switchback Railroad, resulting in numerous injuries, even though there were no deaths. Six lawsuits were brought against the Mumford brothers, the first of which was decided in favor of the plaintiffs for \$800.00. The other five were dismissed; however, in January 1887, the Mumfords' lease was sold at sheriff's sale and the brothers were kept on as employees of the unnamed owner. Two years later the brothers regained their lease and maintained control until their deaths in 1894 and in 1898.<sup>28</sup> In 1899 another set of brothers, Alonzo and Asa Blakslee (the sons of the half brother of Asa Packer's wife), took over the lease to the Switchback Railroad.<sup>29</sup>

Under the Blakslee brothers' control the Switchback Gravity Railroad continued to prosper, although it faced stiff competition from the attraction of nearby Flagstaff Park in Lehighton. Alonzo Blakslee died in 1911, leaving his brother Asa sole lessee. On April 30, 1912, the governor and deputy secretary of Pennsylvania signed an act incorporating the Mauch Chunk Switchback Railway Company. The corporation remained in private hands, with only family members and close friends of the Blakslees as stockholders. Asa Blakslee passed away a few years later, in 1914, and the Switchback corporation named Harry Butler, a Mauch Chunk man and husband of a cousin of the Blakslee brothers, as its president and general manager.

Harry Butler ushered a number of cost saving measures into effect, while keeping the fare for a ride on the Switchback at its original price of 75 cents. Yet the railroad was slowly deteriorating, with a number of major breakdowns closing the system from time to time.<sup>30</sup> The 1920s saw a decline in railroad traffic throughout the United States, largely due to the increasing popularity of the automobile.<sup>31</sup> By 1925, the Switchback reached a point of strong decline that would continue, with only a few brief upswings, until its eventual demise in 1933. In 1929, Butler announced that the Central Railroad of New Jersey decided

to sell the railroad for \$9,000 to a scrap dealer. In reaction, company officers voted to purchase the railroad with money from the sale of stocks and bonds.<sup>32</sup> The railroad continued to run for three more years, but the company incurred more and more debt with continual closures due to breakdown. On September 28, 1933 Harry Butler died. One month later, on October 29, the last Switchback car made the trip from Summit Hill to Mauch Chunk.<sup>33</sup> Despite the efforts of the company and other locals, the railroad's demise was inevitable, and on September 2, 1937 it was sold at auction for \$18,100 to Isaac Weiner, who dismantled it for scrap metal.<sup>34</sup>



SGRR circa 1925 (Hydro)



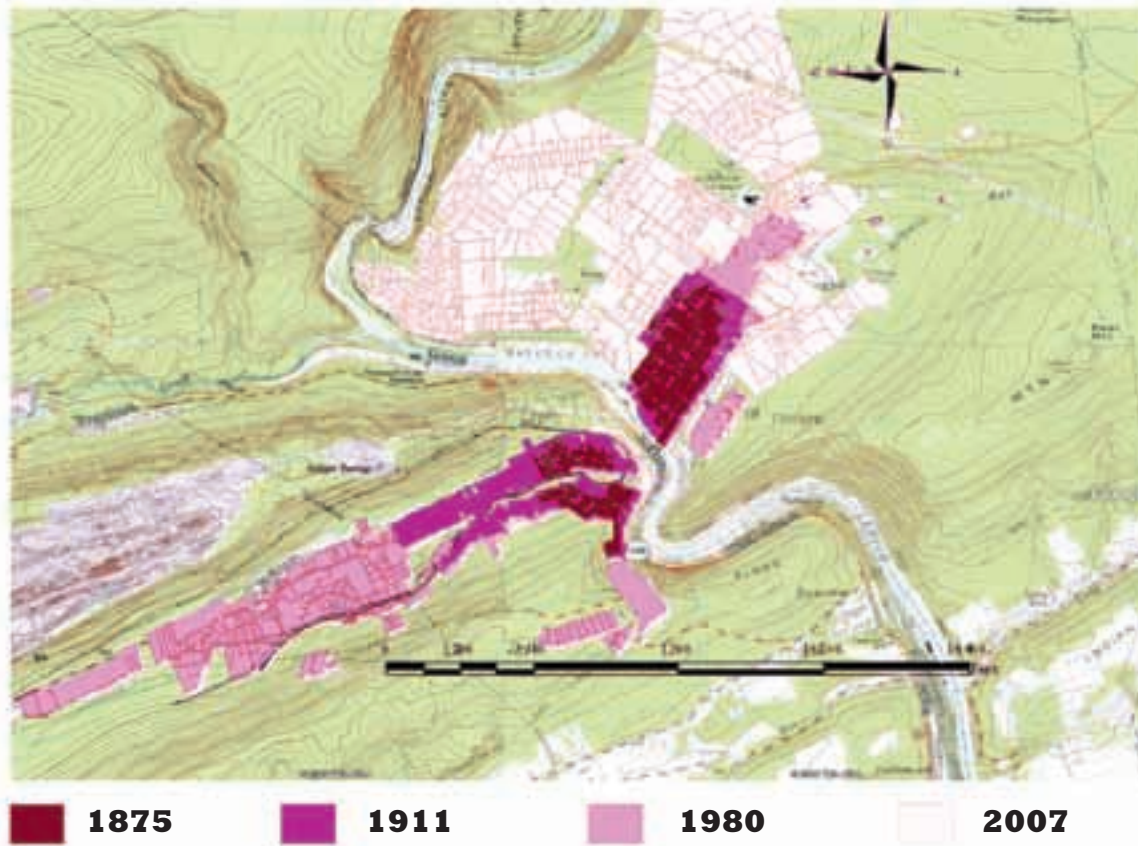
## **Research · Evolutionary Diagrams**

Up to the 18th century, the Lenape people inhabited the land in and around Jim Thorpe. Only after the discovery of anthracite coal on Mount Pisgah in 1792 did others take interest in the site. Coalville (later Mauch Chunk, then Jim Thorpe) occupied a favored site on the Lehigh River. Coal mining began in earnest in the 1830s, and by 1875 the Lehigh Navigation and Coal Company had built the Switchback to transport coal from the mines to the nearby Lehigh River, and downriver to market. Anthracite miners relocated to the surrounding area and Mauch Chunk grew into a substantial town. By 1875, railroads spread development through the valleys, and the tourist trade emerged as another great wave of economic development town.

By the early 20th century, a trolley connected west and east sides of Mauch Chunk. The Switchback, now owned by Philadelphia-Reading Railroad, carried as many as 5,000 people a day. By the 1980s, huge changes had occurred: the coal industry declined; the Switchback ceased to operate; tourism grew more prominent part of the local economy; the town changed its name and continued to spread out geographically. Widespread recognition of Jim Thorpe's historic character led to historic district listing on the Pennsylvania Register (1973) and the National Register of Historic Places (1976). Today, Jim Thorpe is the most prominent town in Carbon County. East Jim Thorpe has expanded to connect to nearby Nesquehoning; West Jim Thorpe spans westward toward Summit Hill and south toward Flagstaff and Lehighton.

The evolutionary diagram on page 15 shows the history of growth in the area of the Switchback using historic maps, Carbon County atlases and Carbon County GIS data. Development is displayed graphically with earliest settlement darkest in color to growth between 1980 and 2007 lightest in color. The areas of color representing each year are layered over the current topography of the area, showing how growth has nestled around and taken advantage of the area's geographical features.

## Research · Evolutionary Diagrams



## **Research · Mapping and Site Survey**

### *Historic Fabric*

Ruinous structures and the original right-of-way are character defining features of the Switchback Gravity Railroad which remain today as treasured pieces of the site's history and contribute to making it a cohesive cultural landscape.

The Switchback Trail begins at the top of Hill Road in the town of Jim Thorpe, directed west towards Summit Hill. Located less than 100 yards from the trail head is an area known to locals as both the Ash Pits and the Catfish Pond. This site once held water used to move the waterwheel at the Mauch Chunk Iron Foundry. According to locals, the site was filled with ash in the 1930's when the Foundry was abandoned following a fire. Structurally, there is not much substance at this site but it has the potential to be archaeologically valuable. The northern segment of the pit is constructed of large coursed rubble stones. A tunnel leads under an older road to the north and another tunnel to the south runs under a partially collapsed section of the Switchback Trail. Within the ash-pits are anthracite coal fragments, pieces of antique and vintage pottery, china, glass bottles and other refuse.

As the trail continues west away from Jim Thorpe toward Summit Hill, it traverses a bridge and merges onto the Lentz Trail Highway. To the north once stood the Hacklebernie Trolley Stop, where riders on the railroad would have disembarked for the pool across the road or continued on to the Hacklebernie Mine Entrance. From here the trolley climbed Flagstaff Mountain to the south while the Switchback cars continued on to the Mauch Chunk Depot. The Trolley Stop remains today as a concrete stairway five treads high, which abruptly terminates—its platform is no longer extant. Behind the stairs to the west are four concrete piers surrounded by vegetation, which once supported the trolley stop's platform. The remnants of the site are significant as a reminder of the trail's existence as a pleasure ride serving vacationers and sightseers.

A stream runs parallel to the trail a few feet to the north of the Hacklebernie Trolley Stop, across which is a large rectangular pool 20 feet long, 50 feet wide and approximately 2-3 feet deep. According to locals, this concrete and stone pool is the old reservoir for the town of Mauch Chunk, which once received all of its drinking water from springs such as these. The pool is currently hidden from plain sight by the overgrowth, and it is unknown what its relationship was, if any, with the Switchback Gravity Railroad.

Continuing on the trail to the southwest and crossing the Lentz Trail Highway, the Switchback Trail follows a meandering creek to Lake Mauch Chunk. Approximately a half mile to the south is what appears to be a raised track resting on pylons of stone. Wooden ties and railroad spikes remain embedded in these three stone piers, which lack any sign or marker. The piers are surrounded by vegetation.

Following the Switchback Trail from Lake Mauch Chunk towards the top of Summit Hill is the Five Mile Tree Overpass, approximately a half mile northwest of the Lake Mauch Chunk Visitor's Center. This site is commemorated in scores of early postcards and photographs touting the Switchback Gravity Railroad as a premier tourist attraction. The Overpass currently consists of two coursed rubble masonry walls with the Trail running between. The walls are fashioned of large stones and stand approximately 20 feet high. The walls are overgrown with vegetation, such as vines. The Five Mile Tree Overpass was where coal cars passed in the thousands from the Jefferson plane and down the backtrack to the flat land on the way to Mauch Chunk.

Between the Five Mile Tree Overpass and Summit Hill, little remains of any distinguishable historic fabric. This portion of the trail joins the backtrack returning east to

## **Research · Mapping and Site Survey**

Mount Pisgah and Jim Thorpe with several ruins along the way. Approximately 1.75 miles from Mount Pisgah, the southern face of the trail is supported by a large, long stone wall that terminates at a plateau and juts out on a rectangular parapet. This is the Stand on the Backtrack. From this point the empty cars raced down the track to the Hacklebernie Mine. The wall is obscured by trees, vines, and shrubs. The dense overgrowth exacerbates its presently obscured condition.

Continuing eastward and roughly 1.6 miles from Mount Pisgah, a harsh, inhospitable rock face interrupts the path. This mass of jagged rock is what remains of the Hacklebernie Mine. Hacklebernie is an old Scottish word for hell, aptly named by the Scotch and Irish mining communities. The mine was closed in 1827, early in the Switchback Gravity Railroad's life, as it failed to produce marketable coal, but eventually re-opened. At the base of the rock face the mine entrance is still open, but is partially flooded, impeding entrance. The mine's history is deeply intertwined with that of the Switchback Gravity Railroad. The site is significant as a long lasting testament to the mining of anthracite coal in the region. At the peak of trail lay the ruins of the western end of the trestle, which connects to the summit of Mount Pisgah approximately a half mile away. The Pavilion Station once stood in this place, where passengers would disembark for lunch and scenic views of Mauch Chunk and the Lehigh River gorge. The small rustic log pavilion offered an overlook, shelter, and seating. Many riders took full advantage of this natural setting, opening their picnic baskets and eating a casual lunch, while admiring the wonderful view, and eventually continuing along on a later car. There is little of material significance remaining on this site. A multitude of photographs and historic images document the no longer extant bridge. Its present state is clearly ruinous, as it is simply an array of concrete footings in two neat rows. Beyond the trestle remains, nestled into the shoulder of Mount Pisgah, are the remnants of the concrete water reservoir that fed into the boilers of the engine house. At present the site is full of debris and refuse as well as overgrown with trees and other vegetation.

Continuing to the summit where passenger and coal cars rolled over the apex, lay the ruins of the Mount Pisgah Engine House. Perhaps the most celebrated of the ruins through literature and postcards; it currently exists as three crumbling stone walls. Partially filled in and overgrown with vegetation, the walls vary from 3 feet to 17 feet in height and are of varying thicknesses.

### *Existing Conditions of the Switchback Trail*

The original right-of-way which has remained in the wake of the Switchback Gravity Railroad is celebrated through a multitude of uses. The map, presented in Appendix B is the result of surveying in small groups, scouting certain segments of the trail and recording observations. This mapping serves to document the existing conditions, noting observations such as traffic flow, litter, use and signage, and allows for assessments to be made on the current conditions of the Switchback trail. Many of the problems associated with the scenic trail exist on its east end by the town of Jim Thorpe. Surveyors found the greatest amounts of litter and noise closest to the Pisgah Plane. Noise was characterized as human generated sounds (for example lawnmowers and car stereos); and experienced primarily on the downtrack. Noise and litter were also found atop the Pisgah Plane, which is the most frequently accessed and most recognized feature of the Switchback Trail. Nuisances related to noise in the natural environment indicates that the Switchback Trail is in close proximity to human traffic and activity. The downtrack is readily accessible from the west end of the Heights neighborhood atop Hill Road. It can also be accessed from the west, and at spots along Lake Mauch Chunk. Between Lake Mauch Chunk and the Hill Road trailhead, there is a campsite for recreational vehicles. Much of the foot traffic may originate here. Access to the trail from the campground is by a small footbridge.

The segment of the Switchback that runs westward from Mount Pisgah is in excellent condition. Surveyors noted few visitors, litter, or noise. This section is also the least frequently accessed with the distance between the two closest trailheads being roughly five miles. The route is popular with mountain bikers and the occasional hiker. It is a natural habitat for bears and other wildlife.

## **18 SGRR Preservation Planning Study**

# Research - Mapping and Site Survey

## *Sites of Significance*

Team members surveyed the SGRR to observe conditions and use a hand-held Global Positioning System (GPS) unit to plot the accurate position of each possible site of significance. Most sites consisted of structures, artifacts, and ruins. The georeferenced data were entered into ESRI ArcMap Geographic Information System (GIS) software for mapping. The most significant sites were ranked based on their historical integrity, material conditions, and the degree to which their relationship to the Switchback's history has been substantiated. They were ranked on a numbered system from 1 (most significant) to 5 (least).



### **Five Mile Tree Overpass**

(Total Score: 2; Historic Integrity: 1; Material Condition: 1)

Site number 23 is what remains of the Five Mile Tree Overpass. It is located at the juncture of the backtrack and downtrack, north of the approximate center point of Lake Mauch Chunk. The remains of the trestle's foundation (tall random ashlar stone walls that line the path) are a landmark along the Switchback trail. The overpass is well documented in historic photos and postcards from the railroad's heyday. The stone walls are in good condition. It has a ranking of 1 for historic integrity and 1 for condition.



### **Stairs to the Hacklebernie Trolley Stop**

(Total Score: 4; Historic Integrity: 2; Material Condition: 2)

The stairs to the Hacklebernie Trolley Stop (as well as its platform supports) are located along the downtrack, approximately midway between the ash pits and the above mentioned unidentified structure. These steps were one spot where passengers would disembark from the Switchback Gravity Railroad. The stairs have historic significance in relation to the railroad. They are concrete and in excellent condition, although they are no longer connected to any larger structure. This site is ranked 2 for historic integrity and 2 for condition.



## Research · Mapping and Site Survey



### Hacklebernie Mine

(Total Score: 2; Historic Integrity: 1; Material Condition: 1)

The abandoned Hacklebernie Mine is the only significant structure remaining that attests to the mining history of the site. The mine entrance is fully intact, however the mine itself has been flooded for years. It has a ranking of 1 for historic integrity and 1 for material conditions. The sites of most significance are described below, ordered by their total score, which is a composite of the historic integrity and material condition rankings.



### Pool near Hacklebernie Trolley Stop

(Total Score: 6; Historic Integrity: 5; Material Condition: 1)

A few feet north of the Hacklebernie Trolley Stop is a stream that runs parallel to the Switchback trail. Across this stream is a large rectangular pool, approximately 20 feet long, 50 feet wide and 2 to 3 feet deep. According to local sources, it was once a water reservoir for the town of Mauch Chunk. The pool is hidden from sight by dense overgrowth, but still holds water. It is unknown what the pool's relationship is to the Switchback Gravity Railroad. It is ranked 5 for historic integrity and 1 for condition.



### Mount Pisgah Engine House

(Total Score: 3; Historic Integrity: 1; Material Condition: 2)

The ruins of the Mount Pisgah Engine House are an extremely important artifact related to the Switchback Gravity Railroad. These ruins are located at the summit of Mount Pisgah. During the process of salvaging the railroad materials for scrap, a fire destroyed most of the structure. All that remains are some stone walls, which require stabilization, but which offer the opportunity for interpretation. This site is ranked 1 for historical integrity and 2 for condition.

## **Research - Contemporary Context**

### *Historic Designations*

The Borough of Jim Thorpe has many historic resources, some of which are listed on the National Register of Historic Places, the nation's official list of cultural resources worthy of preservation. [insert sentence on the extent of the NR district] Two properties in Jim Thorpe are also recognized as National Historic Landmarks: Asa Packer Mansion and St. Mark's Episcopal Church. (Only 3% of all properties listed on the National Register have the additional National Historic Landmark designation.) Listing on the National Register, though an honor for the property and recognition of its importance, does little to legally protect it. While National Register listing does not place restrictions on private property owners, it does bring potential benefits: owners of listed properties may be eligible for a 20% investment tax credit for rehabilitation of income-producing, certified historic structures (see [www.cr.nps.gov](http://www.cr.nps.gov) for details). The entire Borough of Jim Thorpe is also part of the Delaware & Lehigh National Heritage Corridor, which works to conserve cultural and natural resources in the five-county region of Pennsylvania that traverses the historic Delaware and Lehigh Canals.

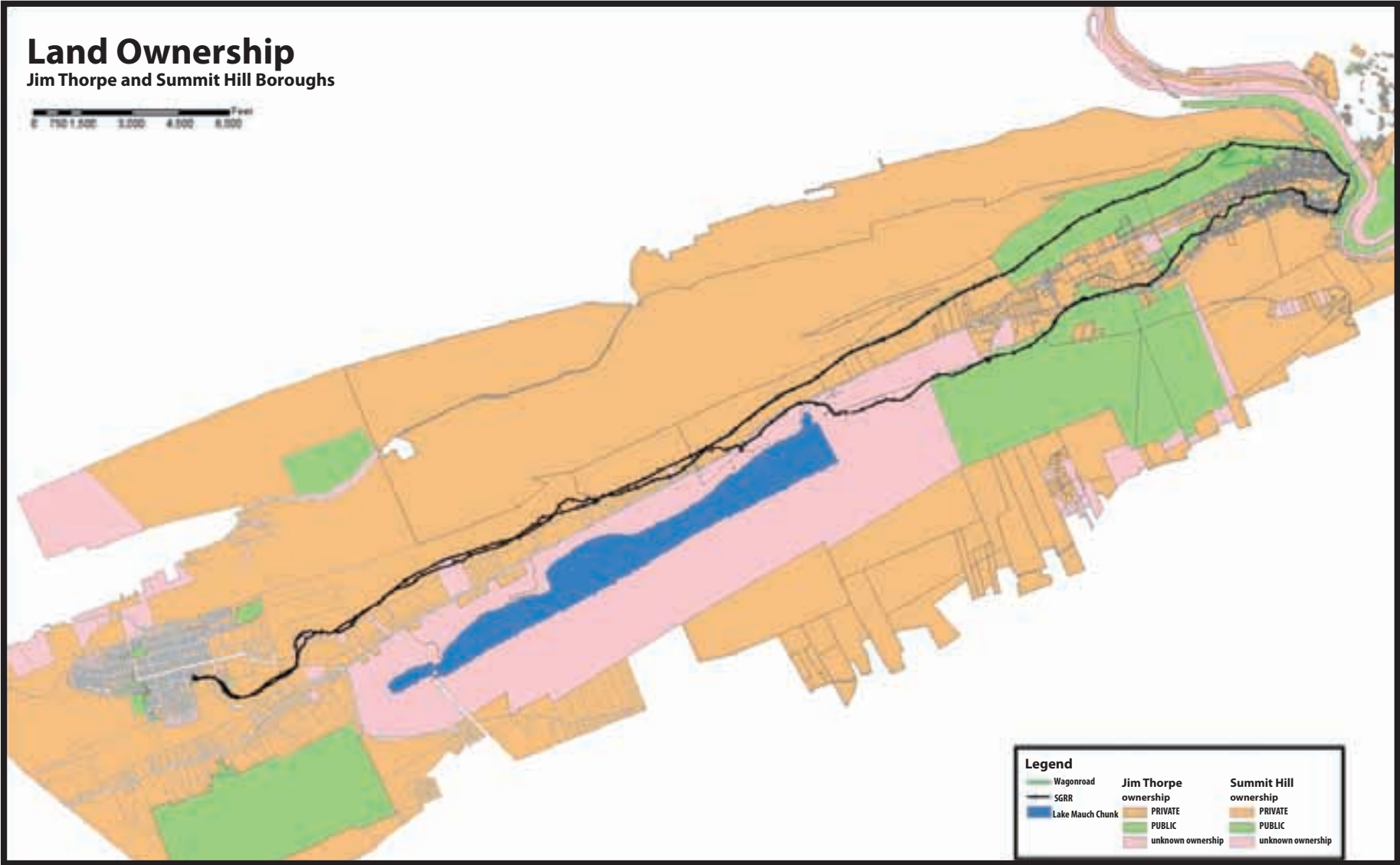
### *Land Use and Zoning*

According to the Carbon County Comprehensive Plan from 1998, land uses in the area are primarily residential and forest, with some commercial, open space, and water (Mauch Chunk Lake). Since the 18-mile Switchback Gravity Railroad loop runs through both the Borough of Jim Thorpe and the Borough of Summit Hill, two separate zoning ordinances come into play in planning for the site. By combining the zoning maps of the two jurisdictions and then overlaying the Switchback track, the team mapped which zoning designations affect the trail, and may limit or enable future use and development. Each zoning district has different permitted uses and limitations, and relevant details can be found in the ordinances themselves and the consolidated zoning map included in the study team's full report. These zoning regulations should be consulted when any future interventions or development is considered. are as follows.

### *Ownership*

Over its 18-mile course, the Switchback trail crosses over multiple property lines. Since any future development and/or preservation activities would require some type of cooperation among land owners and other stakeholders, it is important to understand the pattern and types of ownership involved. Using 2000 Census data and ownership data from the County, each parcel in the Switchback area was classified according to ten categories: unknown ownership, Borough of Jim Thorpe or Summit Hill, Carbon County, Commonwealth of PA, developer/realty company, federal government, municipal bodies, non-profit groups, private residential, and private commercial. The resulting pattern (see map) shows how widely shared the SGRR landscape is among local interests, and also how complex future planning processes are likely to be.





## Research - Comparables

In order to imagine the future development of the Switchback Gravity Railroad, and what effect this might have on the site's historic fabric, natural resources, and surrounding community, the team examined a series of comparable sites. Research focused on sites facing similar issues to the SGRR, and began with a search for places dealing with the following themes: industrial history/heritage; railroad-related(including funiculars); recreational users; proximity to the Poconos; similar-sized small towns with historic attractions. Three sites were selected as most comparable: Horseshoe Curve National Historic Landmark, near Altoona, PA; Lehigh Gorge State Trail between Jim Thorpe and White Haven, PA (as a rails-to-trails example); and Glen Onoko Trail, in Lehigh Gorge State Park. All are located within the same geographical region, cater to similar tourist markets and possess similar natural and/or historical resources. These comparables highlighted the challenges, constraints, and opportunities posed by potential developments on the Switchback Gravity Railroad site, and gave a glimpse of the types of interventions that proven successful at other sites.

### Lehigh Gorge State Trail: Rails to Trails

Because hikers and bikers currently frequent the Switchback Gravity Railroad trail, other successful recreational sites were looked into as useful comparables, specifically sites established by Rails to Trails, an organization that converts obsolete railroad tracks into recreational trails. The Lehigh Gorge trail is 26 miles of an abandoned railroad right of way that runs between Jim Thorpe and White Haven through 4,548 acres of the Lehigh Gorge State Park along the banks of the Lehigh River. This is a multiuse trail that fosters hiking, biking, sightseeing, and photography. For visitors interested in bicycling, rentals are available onsite and shuttle service is provided to and from the trailhead. Visitors to the Lehigh Gorge State Trail can leave their impressions of the site on the Rails to Trails website as well as provide tips to other visitors who may be interested in visiting the site. This trail has proven to be success in preserving the right of way of the old railway as well as the rugged beauty of the natural landscape. It is a useful comparable to the Switchback because this trail has been very successful in maintaining historical assets while still encouraging multi-use visitation; Rails to Trails is also an important organization to consider because it develops sites sim lar to the Switchback for recreational use and provides a great deal of information and support for the community, site managers, and visitors.<sup>44</sup>



## Research - Comparables



Horseshoe Curve National Historic Landmark and Funicular

The Horseshoe Curve National Historic Landmark, which includes a funicular, was selected for analysis as a comparable site because the Switchback Gravity Railroad Foundation has already looked at it as part of their proposal to build a similar funicular on the Pisgah Plane. In many ways, this site faces management challenges similar to those of the Switchback; it also provides useful insight into the benefits and costs associated with the construction of a modern funicular on a historic site. The development of the Horseshoe Curve National Historic Landmark happened in stages, encouraged the participation of all stakeholders, and was completed with the cooperation of the National Park Service. The museum was the first portion of the site to open, and presents railroad history in America; it is not singularly dedicated to presenting the history of the Horseshoe Curve. The site also has a gift shop, the proceeds of which are used to further support the site. The funicular is open seasonally, while the museum is open year round. It is also important to note that the curve is still a functional railroad, serving Amtrak's Pennsylvanian service. Thus, the funicular serves as a means to view trains and functional rail lines in action, and is not an example of a "recreation" or "reinterpretation" of a historic rail line, as a funicular built on the Pisgah Plane would be.<sup>43</sup>



Glen Onoko Trail: Lehigh Gorge State Park

Glen Onoko Trail is a part of the Lehigh Gorge State Park and the Delaware and Lehigh National Heritage Corridor. Many Jim Thorpe residents frequently use this trail; although it is smaller than the Switchback trail, Glen Onoko possesses certain amenities, such as clearly marked access points, parking, and trail signage, that may make it more appealing to recreational users. Like the Switchback, the Glen Onoko trail is slightly off the beaten path, but there are clearly marked directional signs from Route 903 that lead the visitor to the trail's main access point on the Lehigh River. There is a fairly large parking lot located at this point, an amenity that the Switchback trail currently lacks. The signage on the Glen Onoko trail is also much more effective than the signage on the Switchback. At Glen Onoko there are several signs located near the parking lot, which allow visitors to orient themselves with the trail before they enter it; signage includes a map of the trail and surrounding area, the history of the trail, and information about the Delaware and Lehigh Heritage Corridor and the Lehigh Gorge State Park. Again, the Switchback lacks signage that gives visitors a basic overview of the site. Although the Glen Onoko Trail differs from the Switchback in that its central importance is not historical, and because its landscape is potentially more appealing to the visitor, it is still an important comparable in terms of basic trail improvements and visitor amenities that could be established on the Switchback trail.<sup>45</sup>

## **Public Involvement**

In order to gain a better perspective on the Jim Thorpe community the team developed two surveys to administer to visitors and residents. The first survey focused on visitor demographics and experiences in Jim Thorpe. The second survey was designed to learn more about resident demographics, their experiences in the Heights neighborhood, and their thoughts about the Switchback Gravity Railroad and the Switchback Gravity Railroad Foundation's proposal to construct a funicular on the Mount Pisgah plane. The team conducted these surveys in downtown Jim Thorpe and the Heights neighborhood.

### *Residents Survey: The Heights*

The team surveyed a total of 38 residents in the Heights neighborhood of Jim Thorpe (approximately 15% of the households within the target area boundary shown on the Heights Resident Survey Map) throughout October 2007, canvassing door-to-door on both weekends and weekdays. The study was conducted to learn more about resident demographics, their experiences in the Heights neighborhood, and their thoughts about the Switchback Gravity Railroad and the Switchback Gravity Railroad Foundation's proposal to construct a funicular on the Mount Pisgah plane.

The Heights neighborhood was chosen as the target of the survey because it would be the area in Jim Thorpe most affected by development on the Pisgah Plane, as the incline runs directly behind several homes on North Avenue. Development of the plane would also involve the Sam Miller Field, a sports field at the base of the plane used by Heights residents as well as others in the area. The team understands that many of the residents were not home during these times and, therefore, unable to offer their input. In addition, outcry from North Avenue residents at the Public Meeting in early December 2007 indicated the need for a larger scale civic engagement effort regarding the future of the Switchback Gravity Railroad.

The community map on the following page illustrates the areas surveyed. The black dotted line delineates the boundary for the Heights Resident Survey's target area. The team determined that the homes within this boundary would be most impacted by future development of the Switchback Trail, such as the Switchback Gravity Railroad Foundation's funicular proposal.



## Public Involvement



## Public Involvement - Survey Analysis

For many, such as these homes along North Avenue, the Switchback Trail is literally in residents' backyards. The Switchback Trail is heavily used for a myriad of activities year-round. The Studio Team surveyed residences in the Heights, including these single- and multi-family homes along North Avenue at the base of Mount Pisgah.

### *Survey Results*

The survey gave the team an opportunity to speak to residents and gain insight into the community and its attitudes toward the Switchback Gravity Railroad. Below is a list of major points drawn from answers to survey questions.

- Quiet was the most common word residents used to describe the Heights. Other common words and phrases were peaceful, quaint, scenic, and nice neighborhood.
- Residents described the Heights mostly in positive terms. However, most residents conveyed that there have been recent negative changes.
- Heights residents value their community's scenic natural landscape and industrial heritage.
- The Heights is a close knit neighborhood.
- The Switchback Trail is actively used by Heights Residents
- Residents regularly use the Switchback Trail for fishing, picnicking, sport vehicles, beach activities by Lake Mauch Chunk, camping, cross-county skiing, dog play, education, hunting, kite-flying and swimming.

### What Residents Like Best

- 59%.....Mountains/Scenery
- 13%.....Quiet
- 13%.....Familiar (family, friends)

### Resident Awareness of the Switchback Gravity Railroad (SGRR)

- 70%.....Had been on the Switchback Trail (either themselves or a family member)
- 24%.....Had been on the entire 18-mile Trail
- 30%.....Do not use maps to navigate the Trail
- 79%.....Were somewhat or very familiar with the history of the SGRR

### Residents' Use of Sam Miller Field:

Residents described the importance of Sam Miller Field, situated at the base of the Mount Pisgah plane, as a public open space. The field and playground is the only public park that has a playing field in the borough (the playing fields in East Mauch Chunk, the area of the borough on the other side of the Lehigh River are owned and maintained by the public school system).

## Public Involvement - Survey Analysis

Residents' Thoughts on the Switchback Gravity Railroad Foundation (SGRF) Proposal to Construct a Funicular on the Mount Pisgah Plane:

A conclusive statement about the feelings of the Heights residents about the SGRF's proposal cannot be made at this time. Many participating residents did not decisively answer this question and several nonparticipating residents voiced their desire to have their feelings recorded at the Public Meeting. Of those who were surveyed, 26% support the restoration of the Switchback Gravity Railroad and 18% want nothing done with the site.

Residents suggested other alternatives for the Switchback site and these ranged from short-term improvements to major development on the Mount Pisgah plane. Suggestions include enhanced maintenance of existing trail, the establishment of a wildlife sanctuary, enhanced maintenance of Sam Miller Field, residential development, and the installation of a lift for downhill skiing.

The Heights will be affected, both positively and negatively, by most development of the Switchback site including the SGRF's proposal. Several residents noted the economic benefits of development while others expressed concern over the affects on the environment and the increased amount of visitors and traffic that would accompany an attraction on the plane. Residents also indicated concern about the following issues: access, cost, infrastructure, nuisance and private property rights. Others noted that the proposal may increase the community's recreational opportunities and awareness of the site's history.

### *Visitors Survey: Downtown Jim Thorpe*

The studio team surveyed a total of 27 visitors in Downtown Jim Thorpe throughout October 2007. The surveys were gathered during the Fall Foliage Festival as well as other weekend and weekday periods. The team understands that this figure is not statistically significant and therefore recommends the completion of a more in-depth visitor survey by the Project Partners. This study was geared toward learning more about visitors' demographics, their experiences of Jim Thorpe, and their awareness of the Switchback Gravity Rail Road.

### Visitor Demographics

- 84%.....From the Tri-State Area (Pennsylvania, New Jersey, New York)
- 92%.....White, Non-Hispanic
- 81%.....Have children
- 100%.....Accompanied by companions (family, friends, and/or significant others)

### *Survey Results*

The survey allowed the team to learn more about the visitor experience in Jim Thorpe. Most visitors noted that shopping, dining, biking, walking and visiting railroad attractions were among the activities they participated in while in town. Quaint was the most common word visitors used to describe Jim Thorpe. Other common words and phrases were scenic, tranquil, historic, charming, and little village. Visitors commonly compared Jim Thorpe to New Hope, Pennsylvania and Europe. Of those surveyed, 68% were somewhat or very familiar with the history of the railroad and 81% would have an interest in a historic or recreational site that interprets the history of the Switchback. Only 23% had ever used the trail. The team hesitates to draw a conclusion from this data about the demand for a tourist attraction associated to the Switchback historic landscape because surveying was not extensive enough. A more thorough survey would need to be conducted to gain accurate knowledge of this information.



## **Public Involvement - Interviews and Public Workshop**

From late October to mid-November, the Studio Team had the opportunity to observe and participate in stakeholder interviews scheduled and led by Dale Freudenberger of the Delaware and Lehigh National Heritage Corridor (D&L). Stakeholders included a wide range of public, private, and non-profit entities, from Jim Thorpe to Lansford, including historical, natural resource, recreation and business groups.

Twelve of the stakeholders contacted by D&L scheduled interviews. The Stakeholder Interview Summary Chart lists highlights key information gathered. These stakeholder interviews informed the Team's recommendations, particularly the development of the policy statements. Most stakeholders viewed the entire 18-mile loop of the Switchback Gravity Railroad Trail as a regional recreational asset to be preserved and enhanced. Improved maintenance of the existing Trail was a chief priority, followed by improved interpretation and signage.

Additionally, Stakeholder interviews also revealed that while a majority of stakeholders felt the Switchback Gravity Railroad Foundation (SGRF) proposal was a positive idea, they were overwhelmingly concerned about various potential impacts, ranging from environmental to neighborhood to transportation. Many stakeholders were united their desire for SGRF to complete studies regarding their proposal before formally approving or disapproving. Government and business organizations felt that the proposal could produce positive benefits for tourism economy of both the Borough of Jim Thorpe and Carbon County. The greatest concerns of all stakeholders were neighborhood impact and transportation issues, including traffic congestion and parking accommodation.

### *Public Workshop*

On December 6, 2007, the Project Partners facilitated a Public Workshop in Jim Thorpe that included a presentation by John Drury of the Switchback Gravity Railroad Foundation's proposal to construct a funicular on the Mount Pisgah plane and an overview of the Studio Team's research by Randall Mason. Following the presentation, Members of the Team had the opportunity to listen to residents' feedback.

Approximately fifty residents attended the Public Workshop. The response to the SGRF proposal was overwhelmingly negative. In particular, residents of North Avenue (abutting the Switchback Trail) strongly opposed the proposal. In addition, residents raised issues regarding improvements to trail safety and directional signage, conflicts with recreational uses of the SGRR ridge, and perceptions of privatizing public land for business purposes.

Residents expressed great desire to have their voices heard. Many residents who were unable to participate in the Heights Resident Survey when the Studio Team canvassed door-to-door wanted the chance to share their concerns in the survey. While the Studio Team was unable to include additional data in the analysis for this report, a more in-depth community study to accurately assess public opinions regarding the Switchback Gravity Railroad is recommended.

## Public Involvement - S.W.O.T.

An analysis of strengths, weaknesses, opportunities, and threats (S.W.O.T.) was performed to synthesize the data accumulated from archival, ethnographic, site documentation, public involvement and policy research. The goal of this analysis was drawing on all of the research and public feedback to identify the critical factors facing the future of the Switchback Gravity Railroad. What follows is a summary of the greatest strengths, weaknesses, opportunities, and threats as identified by the Switchback Gravity Railroad Studio Group.

### *STRENGTHS*

The existing viewsheds, the surrounding Tourist/Recreation infrastructure, as well as the Multi-Use of the Trail were identified as the Switchback Gravity Railroad's most significant strengths. The primary strength of the Switchback Gravity Railroad are the viewsheds that could be enjoyed by all visitors. This strength has been consistent throughout the history of the site, as enjoyed by early pleasure seekers who rode on the Switchback as the first rollercoaster, by the current hikers and bikers who ascend and descend the slope respectively. The surrounding tourist infrastructure was also found to be a strength, as Jim Thorpe has evolved into a popular destination due to its downtown renovation and scenic qualities. Like many small former-industrial towns, Jim Thorpe went through a period of industrial decline during the mid-twentieth century. However, unlike other towns, Jim Thorpe managed to reinvent itself through a series of initiatives, most importantly as a pilot site for the Main Street Program. The multi-use of the trail was also found to be a primary strength, as the 18 mile loop of the Switchback Gravity Railroad Trail allows for hiking, biking, fishing, hunting and other recreational uses. This multiuse is not only a benefit to visitors, but also residents of the community.



or

## **Public Involvement - S.W.O.T.**

### *WEAKNESSES*

Conflicting opinions regarding development, the lack of historic fabric, and poor signage were all identified as the Switchback Gravity Railroad's most significant weaknesses. One of the primary weaknesses facing the Switchback Gravity Railroad landscape is the disagreement over development. Some stakeholders within the town support the proposal of the Switchback Gravity Railroad Foundation to rebuild and recreate a funicular on the Pisgah Plane. Other groups, such as those residents who live close to the site, oppose any development as it will lead to more traffic and noise. Furthermore, the lack of historic fabric can be seen as a significant weakness of the site. This shortage of material remains makes it difficult not only for visitors to appreciate the site, but also making for interested parties to draft a comprehensive preservation plan. Finally, poor signage was identified as significant weakness of the site, as many visitors find it almost impossible to navigate the entire 18 mile loop of the site. At several points the trail ends with no signage to indicate where the visitor should proceed next

### *OPPORTUNITIES*

Tourism – Economic Development, the opportunity to interpret existing historic fabric, as well as using the Switchback Gravity Railroad as a catalyst for change, were identified as the most significant opportunities. One of the primary opportunities found for the Switchback Gravity Railroad is the possibility for tourist and economic development. The possibility of rebuilding the funicular or making improvements to the trail itself would lead to greater visitorship and economic benefits to residents in the region of the Heights, the neighborhood situated closest to the Pisgah Plane. The possibility of interpretation of the existing historic fabric was also identified as an opportunity, as little research has taken place prior to the studio workshop's commencement. Further interpretation could lead to greater information about the function of the Switchback Gravity Railroad and its history. Finally, the Switchback Gravity Railroad as a catalyst for change could also be an opportunity, as improvement of the site, whether through greater amenities or the recreational benefits of the funicular would lead to greater economic opportunity and development for Carbon County and the town of Jim Thorpe.

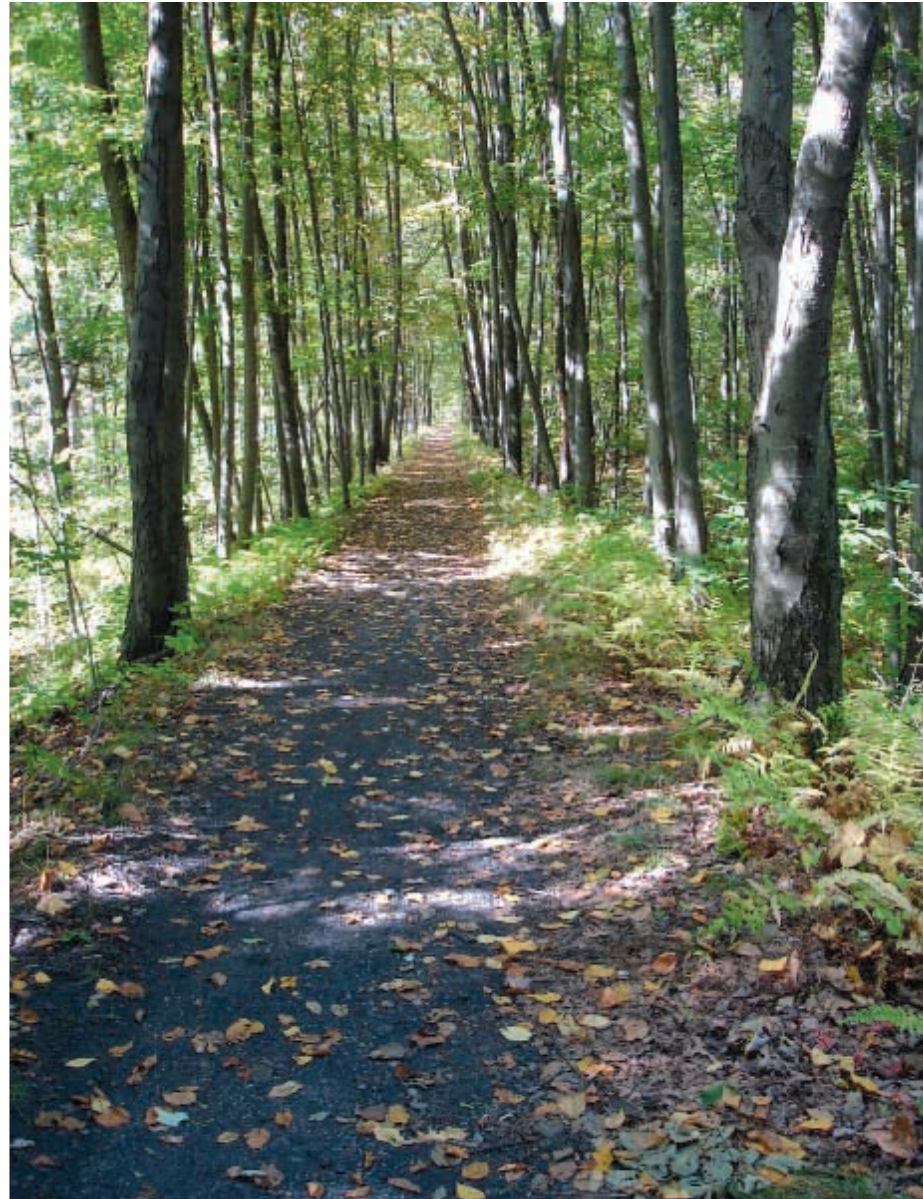




## **Public Involvement - S.W.O.T.**

### *THREATS*

Conflicting trail use, the taxing of infrastructure, noise, the perception of the Switchback Gravity Railroad Foundation, and increased traffic on the trail were identified as significant threats to the Switchback Gravity Railroad. There are many outside elements that could be potentially threatening to the future of the Switchback Gravity Railroad. Possible conflicting trail uses were identified as a primary threat, as the Pisgah Plane and other portions of the 18 mile loop are currently used for illegal activities such as ATV riding. Furthermore, the possible development of a funicular would negatively affect other stakeholders such as hunters by decreasing their recreational space. The perception of the Switchback Gravity Railroad Foundation, the organization behind the proposal for the funicular on the Pisgah Plane, can also be perceived as a threat. Many residents of the town view the Foundation leadership as fronted by outsiders who do not have the best interest of the town at heart. They believe that any additional tourist development of the town would lead to further degradation of the town's unique character. The taxing of infrastructure, noise, and increased pedestrian and vehicular traffic were also valued equally as tertiary threats. If the trail continues to erode at its current rate or development proceeds at a pace that outstrips infrastructure development, the trail could fall into further disrepair and the town would suffer.







# Objectives

Based upon the research and analyses conducted, the studio developed a set of policies to address the current and future state of the Switchback Gravity Railroad. These objectives are a set of guiding principles based on upholding the core values of the site while also taking advantage of opportunities for development and increasing access. They have been used to determine a recommendation list of acceptable future actions associated with the Switchback Gravity Railroad site.

## **OBJECTIVE #1 Preserve the SGRR Historic Landscape**

## **OBJECTIVE #2 Protect the Existing Natural Resources**

## **OBJECTIVE #3 Interpret the Site**

## **OBJECTIVE #4 Preserve and Enhance Use and Access**

## **OBJECTIVE #5 Engage the Community**

## **OBJECTIVE #6 Establish a Management System**

The six objectives presented are based on the entirety of the semester's work, including historical research, ethnographic research, environmental research, GIS mapping, and stakeholder interviews. Addressing the current needs and future potential of the site, each policy is presented fully later in this report, including sets of distinct strategies and actions outlining what should be done to satisfy the policy recommendations.

For each objective, a range of acceptable actions has been identified in terms of minimum and maximum responses proposed to achieve appropriate preservation and development of the site. They are termed "at least" and "as much" actions. "At least" actions should be taken sooner, in response to some of the site's most pressing concerns. They generally require the least amount of funding, infrastructure, and manpower. "As much" actions represent the highest degree of intervention that should be implemented without negatively affecting the integrity and significance of the Switchback landscape. These actions generally require higher levels of funding, organization, and commitment than exist at present. In addition, the group identified some actions that should not be undertaken because they would be inconsistent with these overall objectives. The illustrative projects described following each objective are the result of research done by individuals and groups among the study team to offer examples and/or solutions on how each objective might be carried out in the future.

## **Objective #1: Preserve the SGRR Historic Landscape**

Remnants of the historic SGRR landscape should be preserved and stabilized in situ, and as a whole. These include the ruins of buildings and engineering structures, as well as landscape features (roads, rights-of-way, sites, views). The Mt. Pisgah Plane and summit are among the most significant areas to be preserved. The site must be viewed in its entirety (the 18-mile loop and its historic environs) when considering any plans for change. Decisions about particular places, resources, or activities must be evaluated in terms of their impact on the whole SGRR historic landscape.

### *Rationale*

The Switchback Gravity Railroad is an historic landscape recognized as highly significant to American industrial and railroad history, the development of Pennsylvania coal fields, and the founding and development of the town of Mauch Chunk/Jim Thorpe. This value is rooted in its ruinous landscape; it is the remaining physical fabric that links this area with the SGRR's larger history. Furthermore, the true value of the SGRR can only be experienced directly on the site, where visitors can see and connect with the remaining fabric of a milestone in American industrial history.

### *Interventions should include AT LEAST...*

- Stabilization of ruins and improved maintenance of the trail
- Establishment of formal limits on development and construction designed to protect ruins

### *Interventions might include AS MUCH...*

- Development of separate amenity structures (such as an observation tower, picnic tables, benches, etc.) with sensitivity to ruins

### *Strategies and actions should include AT LEAST...*

1. Stabilize and collect data on the historic ruins/fabric along the trail
  - Prioritize historic fabric/elements based on historical significance as it relates to industrial history, railroad history, and Jim Thorpe.
2. Communicate the significance of the SGRR, complementing existing efforts
  - Develop historic narrative of the entire 18 mile route.
  - See Policy on Interpretation
3. Maintain the original SGRR right of way as a whole, historic landscape, functioning as a multi-use trail as well as an interpreted historic site.
  - Map entire original right of way.
  - Establish protective measures for right of way, via zoning, designations, enhanced signage, etc.

### *Strategies and actions might include AS MUCH...*

1. Manage/redesign the SGRR landscape to enhance the visibility of historic structures and elements.
  - Design plans for priority sites of ruins, key parts of the right-of-way, and important historic views.
  - Review and establish as necessary
2. Areas under consideration for preservation, development, or other management change must be investigated within their larger historical and geographic context.
  - Use historic information from Strategy #1 to determine development potential of specific sites.
  - Establish design protocols and standards for development (trail development, economic development) that are sympathetic.



# **Illustrative Project #1: Stabilizing and Interpreting Ruins**

Nicole Collum

## *Project Summary*

The goal of this project is to survey the sites of significance identified by the mapping team and create a potential interpretive tour that would better incorporate the connection of the Switchback Gravity Railroad to the mining history of the Lehigh Coal and Navigation Company as well as to its early American tourism roots. Based on Objective number one, Preserve the SGRR Historic Landscape, the preservation and interpretation of the entire trail of the Switchback Gravity Railroad must be undertaken in order to maintain the site as a whole. The development of a maintenance plan for three key sites outlined in this project will serve as a base plan for the rest of the existing ruins along the 18 mile loop according to the “at least” and “as much” actions outlined in policy number one.

The three sites that have been selected for this project are the stand on the backtrack, the five-mile tree overpass, and the Hacklebernie mine. These sites were chosen based on recommendations from the mapping team who identified them as the most significant extant sites on the Switchback Gravity Railroad trail based on their historical significance and current condition.

## *Stabilization Plan*

In order to stabilize each of the ruins for this project, an engineering study and conditions survey must be conducted. This will ensure the life safety of each site for visitors and will identify active decay mechanisms to be treated and mitigated by conservation professionals to ensure the longevity of the ruins.

## *Interpretation Plan*

A comprehensive tour could be conducted as a walking tour for hikers or could be lead as a bike tour with the significant sites being pull off points for reflection. This plan would retain multiple use of trail and would provide a comprehensive telling of the history of the Switchback Gravity Railroad.

## Objective #2: Protect Existing Natural Resources

Protect environmental resources and viewsheds associated with, and surrounding, the Switchback Gravity Railroad.

### *Rationale*

The viewsheds and natural landscapes of the area have been pivotal in drawing nature-seeking tourists to the “the Switzerland of America.” This policy recognizes the enormous importance of the natural landscape to the entire region—as an ecological resource, a visual/quality-of-life factor, and pillar of the tourism economy. The community values the area as a complex natural landscape and utilizes it for many recreational activities. The mountain area functions as part of a larger regional ecosystem, and any large-scale development can have negative impact on the continuity of watersheds, forestry and natural resources. Recent tourism and residential development in the area pose potential threats to and put strain on the natural resources.

### *Interventions should include AT LEAST...*

- Increased maintenance of natural landscape (including current trails and habitats)
- Follow the existing ecological study and environmental recommendations.

### *Interventions might include AS MUCH...*

- Restoration of the surrounding ecosystem
- Establishment of conservation easements designed to protect the natural landscape

### *Strategies and actions should include AT LEAST...*

1. Establish priority viewsheds and threats to them.
  - Create a plan to monitor environmental conditions around the SGRR.
2. Document existing protections and programs related to natural landscape.
3. Make connections and reconcile any conflicts with ongoing natural-resource protection efforts and the preservation/ development objectives related to SGRR.

### *Strategies and actions might include AS MUCH...*

1. Protect extant historic landscapes and views, balancing historic values with environmental values.
  - Explore land preservation tools with landowners and other stakeholders.
  - Establish restrictions against any future development that may block established and documented viewsheds.

# **Illustrative Project #2: Switchback Trail Land Management Plan**

Anita Franchetti

After carefully analyzing the history and existing conditions of the 18-mile Switchback Gravity Railroad trail, it is evident that the community is in need of a management plan to assist in protecting and maintaining environmental resources within the historic landscape. Rationale for Policy #2, Environmental Resources, states that the community values the area as a complex natural landscape and ecological resource, and that there must be protection of these resources. The ecology surrounding the Switchback Gravity Railroad trail is diverse and plentiful with natural systems and scenic beauty. The integrity of the natural environment needs to be carefully planned and managed to protect the natural habitats for the many wild plants and animals living in the region. Of concern is the rapid population growth and development in the area, and a great interest in planning growth carefully to maintain open space and guide development away from environmentally sensitive areas.

## *Existing Partners and their Relationships with the Switchback*

The Carbon County Parks and Recreation Department works to conserve the natural areas within the 2820 acre forestland around Mauch Chunk Lake Park and surrounding areas for recreational use by residents and tourists alike. The Delaware & Lehigh National Heritage Corridor manages the Delaware & Lehigh Trail, linking Wilkes Barre and Bristol with the recreational Switchback Railroad Trail. The D&L works closely with the community to reach conservation goals. Their Tenders Program is an association of volunteer groups who help maintain the trails, providing litter cleanup, repair drainage problems, patch trails, clean and replace signs, control invasive plants and seed native species. They are also involved in trail enhancement projects.

## *Land Management Plans*

Local non-profit organizations are a great way to bring stewardship to environmentally sensitive land and protect it from development. Common land conservation techniques include fee simple acquisition, conservation easements, and land management and stewardship. Stewardship is the least expensive land preservation strategy and involves an understanding of the values and roles of the resources on the land. These values should be considered in the development and maintenance plans for private and public land.

## Objective #3: Interpret the Site

Interpretation of the evolution, significance, and current state of the SGRR for the casual visitor should be implemented along the SGRR itself—as a complement to the detailed interpretation already created off-site by the Foundation and the Mauch Chunk Museum. The SGRR must be interpreted as an integrated whole.

### *Rationale*

The National Register nomination calls the site the “Mauch Chunk and Summit Hill Switchback Railroad,” clearly outlining the fact that the railroad’s 18-mile loop was a cohesive unit that was and still is located within multiple communities. The entire right-of-way remains largely intact. Generations of residents and visitors have used the 18-mile loop for recreational activities such as hiking, biking, and cross-country skiing. Thus, the site should be considered as a whole not only due to its recreational use as a unified trail, but also because its historical significance is based upon the construction and use of the entire 18-mile loop as system of coal and tourist transport. Because the Switchback’s loop is located within multiple communities and jurisdictions, it is imperative that any decisions made regarding any portion of the site take into account their effect on the site (and surrounding communities) as a whole.

### *Interventions should include AT LEAST...*

- Additional interpretive signage & clarification of existing interpretation
- Directional signage clarifying trail routes and resources along the trail

### *Interventions might include AS MUCH...*

- Tours, community activities, and programming initiatives
- Construction of amenities to serve trail users

### *Specific Strategies and Actions*

#### *Strategies and actions should include AT LEAST...*

1. Create passive interpretation systems bringing the story of the SGRR and its significance to the many audiences visiting the trail and Jim Thorpe.
  - Create a comprehensive signage system, integrating directional and educational information.
  - Create brochures, maps or other take-away materials supporting both interpretive and wayfinding functions.

#### *Strategies and actions might include AS MUCH...*

1. Undertake additional research, as needed, to build a complete picture of the SGRR’s historic evolution and significance.
  - Conduct a study to document the Heights residents’ use of and folklore about the SGRR site.
  - Driving/biking audio tours

## **Illustrative Project #3: Interpretive and Directional Signage**

Alex Bevk and Emily Wolf

One of the major missing components of the Switchback Gravity Railroad Trail identified is adequate signage. A few years ago, the Switchback Gravity Railroad Foundation implemented a series of interpretive signs throughout the trail at sites they deemed most important. Other signs, such as those implemented by the Carbon County Park System, also exist throughout the trail. These existing signs however are inadequate in communicating the multi-faceted nature of the Switchback Gravity Railroad and the environment it exists within. Based on conversations with stakeholders and personal exploration of the trail, it was also deemed necessary to install a more effective directional signage system. Visitors are often confused about the location of access and exit points and trailheads; the addition of directional signage would mitigate this problem.

The content of each sign will include these five elements:

1. A brief historical narrative
2. Historic facts related to the history of the Switchback and to the area's larger coalmining and industrial heritage
3. Recreational facts relating to each site
4. Environmental facts relating to each site
5. A quote from a community member about their memories of or experiences at a particular site; their picture will also be included

The signs, divided into five clearly delineated sections, are designed to impart to the visitor the variety of ways in which the Switchback is an important and meaningful site; the different quadrants of information are intended to correspond and coordinate with appropriate policies (including historical, environmental, community, and use) to further reinforce the site's multi-faceted history and function. Specific care was taken to ensure that the written sections of the interpretive signs are readable; it is hoped that everyone, including children, will be able to read and take away information from these signs. For this reason, text is kept to a minimum, each content section is clearly divided into easily discernable themes, and bullet points featuring interesting facts enable the signs to function as clear, interesting, and accessible sources for all visitors to the Switchback trail.



## Objective # 4: Preserve and Enhance Use and Access

Continue cultivating use of the SGRR historic landscape as a recreational trail. Preclude use/access that causes damage to the historic resources (ruins, sites and landscapes)—wheeled vehicles and other illegal uses. Selectively improve access for additional user groups (who would not otherwise have access because of physical challenges of getting to the SGRR)—only where the improvements will not adversely affect SGRR historic resources.

### *Rationale*

Recreational use of the trail has, over time, come to be an important cultural value of the place—hiking, hunting and scenic views are part of the SGRR cultural landscape. Continuing use of the SGRR—for non-heritage uses as well as historic interpretation—makes the place relevant to contemporary stakeholders and is a politically strategic means of helping preserve the landscape.

### *Interventions should include AT LEAST...*

- Maintaining multi-use function of trail
- Establishing a maintenance plan for the trail
- Making access points more visible through improved signage
- Improving directional signage along the trail

### *Interventions might include AS MUCH...*

- Connecting the Switchback to other regional trails
- Selective creation of new trail heads
- Construction of access system(s) that do not harm historic fabric or natural environment for individuals who cannot currently access the site

### *Strategies and actions should include AT LEAST...*

1. Work with existing stakeholders to improve linkage amongst existing regional trails.
  - Improve signage on the trail to clarify points of interest and direction.
  - Evaluate the need of more entrance points along the trail to allow visitors more access.
  - Continue to encourage continued traditional community use of the trail.
2. Continue to develop additional means of allowing visitor access to the trail.

### *Strategies and actions might include AS MUCH...*

1. Physical issues such as erosion, drainage and litter will be monitored in support of the County's efforts to maintain the entire loop.
  - Commission study to determine the economic feasibility of (and otherwise identify funding streams for) "improved access" proposals.

# **Illustrative Project #4: Alternatives for Accessing the Pisgah Plane: Feasibility Study**

Jenna Cellini and Sean Fagan

The purpose of this project is to analyze the availability and feasibility of alternative access points for ascending the Pisgah Plane. Though the Pisgah Plane is on the National Historic Register, it is not a protected site. Not only is the type of path a necessary decision, but the actual location of such trail ways is a crucial step in improving accessibility to the Mount Pisgah Plane. The site's topography and existing conditions were studied to compare possible new areas for pathways to each other and to the two already existing routes: the Mount Pisgah incline and the Wagon Road. Another possibility would be to place a pathway along the northern, undeveloped portion of the mountain range. This pathway could connect to Catawissa Road, which hugs the northern perimeter of the mountain, making it a convenient and easy to find trail. Also, a pathway on this portion of the mountain would not disrupt the original trail or historic ruins. However, creating this route would require the most work, since dense forests extensively cover the area. Another area that could be developed into a path leading to the Pisgah Plane is along the eastern-most portion of the mountain. Although creating a route here would require some demolition and construction, the area is only scarcely scattered with trees. Another pathway that should be considered is the White Lane Path. Although this route does not connect to the Pisgah Plane, it should be considered as a possible utility path for the County Parks department to access the upper portion of the track.

The structural, political and economical feasibility should be considered for each option at each location; however, just because implementation of an option is feasible does not mean it is in keeping with the original policies set forth for the site. Each option must be assessed in terms of the six policies outlined in this report (historical, environmental, interpretation, use and access, community involvement and maintenance). Particularly, the systems should not disrupt the original fabric of the trail or the ruins, nor should they severely alter the environment or stimulate negative ecological affects to the mountainous region.

## *Conclusions*

The above analysis has highlighted specific recommendations according to the five distinct access points. The most suitable area to improve access is the Wagon Road, where either a stair system or railing system could be implemented. This pathway is already cleared and moderate alterations of it would not interfere with the existing trail system, environment or historic landscape. This rail or stair system could be along the perimeter of the path, leaving room still for hikers or bikers who wish to approach the incline as it currently is. Also, the width of the path leaves the option of allowing the Parks Department to drive emergency vehicles up to the peak if necessary. The system may also intersect the Wagon Road, creating a direct route from the base of the mountain to the peak. The Wagon Road could intersect the system at different points, allowing visitors the choice of ascending the incline along the winding Wagon Road or up the straight stairwell. In order to preserve the historic path and multiple uses of the Switchback trail, the only appropriate alteration to the Mount Pisgah Incline would be to improve its erosion control and maintain its cleared presence for bikers and hikers. The Wagon Road has proven a more viable candidate for access in this area of the mountain, and as such, should be considered instead of the actual Pisgah Incline where historic ruins remain. If more resources become available after upgrading the Wagon Road, White Lane Path and Liberty Road Path are other viable options for accessing the trail. Although this is farther west than the other, placing a stair or rail at White Lane Path would allow visitors access to a portion of the trail they previously could not access. The trail's proximity to the County Parks Department also offers the possibility of keeping the pathway a limited means of access for Park Rangers and others that need to monitor and maintain the site. A trail along Liberty Road Path may be possible given the amount of room that this portion of the site offers. However, since it falls within private ownership, zoning and legal matters need to be resolved before any construction can be implemented.

## **Illustrative Project #4: Alternatives for Accessing the Pisgah Plane: Feasibility Study**



The Mount Pisgah Incline



The Wagon Road



Catawissa Path



Liberty Road Path

## Objective # 5: Engage the Community

All stakeholders must have the opportunity to be involved in discussions regarding preservation, development or management of the Switchback Gravity Railroad, and use the place in varied ways. Ongoing management of the site will depend on the coordinated action of multiple partners, frank discussion of conflicts (potential and real) and how to resolve them.

### *Rationale*

The residents of Jim Thorpe are essential stakeholders in the preservation of the Switchback Gravity Railroad. The site's historical significance should be a more prominent part of the collective memory and historical identity of the local community. As the most proximate parties, Jim Thorpe and other area residents will be the greatly affected by any plan for developing the site, and their involvement will be crucial to creating an appropriate and effective preservation plan. Exclusive use of the SGRR by one group or another—or even the appearance of it—will continue to result in conflict. Regarding the SGRR as a “commons” is important for the success of future preservation and management efforts.

### *Interventions should include AT LEAST...*

- Regular outreach to the community to obtain input and feedback

### *Interventions might include AS MUCH...*

- Creation of an involved community group (such as a friends group), to work with the site's management structure

### *Strategies and actions should include AT LEAST...*

1. Reinforce neighborhood connection through parallel community-driven project(s) relating current residents to the area's history.
  - Website catalogue of oral histories modeled after [www.placematters.net](http://www.placematters.net).
  - Include stories and images from past and present members of the community on trail signage and literature.
  - Annual “Clean-Up and Picnic” for community members to maintain and celebrate the site.
  - Identify sites of cultural importance to Heights residents and evaluate impacts of future development on these areas.

### *Strategies and actions might include AS MUCH...*

1. Partners in the SGRR's development must ensure a sustained community dialogue by establishing lines of communication and outreach to residents, stakeholders, and visitors.
  - Establish a Heights Residents Advisory Council as a liaison for site development review; this organization will ideally also have the capacity to address neighborhood revitalization issues.
  - Establish a broader representational committee of community stakeholders (drawn from around the SGRR area) to attend client meetings regarding site management issues.
  - Conduct formal Visioning Process via public meetings and an interactive website.



# **Illustrative Project #5: Programming Plan and Education Curriculum for the Switchback Gravity Railroad**

Caroline Cheong, Kimberly Forman, Maureen McDougall and Sara McLaughlin

While many Jim Thorpe residents are keenly aware of their town's industrial heritage, there remains an opportunity for further education. From descendants of Switchback workers with an intimate knowledge of the railroad, to those who have only heard the name in passing, interactive programming will benefit people of all degrees of awareness. Taking place both on the Switchback trail and in Jim Thorpe, activities such as tours and open houses provide direct interaction with the site and town's history. Our goal is to increase this interaction by providing more opportunities to learn about the Switchback's history while participating in a myriad of contemporary uses. Surrounded by mountains on three sides, Jim Thorpe has a plethora of cultural and natural resources at its disposal. These resources offer distinct opportunities for a diverse array of social programs that will interpret and promote the town's unique heritage. Tours are a major programming component to any historic site and should be adopted for the Switchback Gravity Railroad. They are one of the most interactive methods for bringing visitors to the site and allows them to engage with the site directly.

Additionally, the younger generation could benefit greatly from programming incorporated into their regular schooling, to instill knowledge and appreciation of the site. This project investigates possible ways in which the history of the Switchback can be incorporated into the 7th-8th grade level history curriculum in Jim Thorpe schools. By designing curriculum initiatives which involve a tangible local site, students will become more familiar with the history that lies in their own backyards. By educating young residents about the history of the Switchback Gravity Railroad, knowledge and appreciation will be garnered.

Possible Lesson Plan Themes:

1. Technology of the SGRR – How the creators of the Switchback utilized gravity and emerging locomotive technology to work the railroad. Sites to be discussed include:
  - The backtrack
  - The trestle bridge
  - Barney cars and cable/pulley system
  - The canal and the chutes
2. Coal Mining Heritage – How the discovery of coal and the Industrial Revolution affected the development of Jim Thorpe, Summit Hill, and the surrounding areas.
  - Discovery of anthracite lead to the development of Mauch Chunk
  - Big Names/Small Names – the lifestyle of Asa Packer and other prominent Switchback individuals versus the workers on the railroad and in the mines
3. Leisure Culture – How the timing of the Switchback as a “leisure carriage” corresponds with the growth of the middle class and the ability of more Americans to experience “leisure time.”
  - The Switchback as a rollercoaster after it outlived its use for mining
  - How the trail remains a place of recreation today

## Objective # 6: Establish a Management System

The 18-mile Switchback Gravity Railroad site should be operated and maintained under a comprehensive Management Plan, including clear institutional arrangements and partnerships.

### *Rationale*

With a variety of stakeholders the Switchback Gravity Railroad's 18-mile site is a complex landscape to manage. The incorporation of a management plan would provide a single comprehensive set of standards to follow, to assure proper conservation and preservation of historic structures and the natural landscape.

### *Interventions should include AT LEAST...*

- Regular outreach to the community to obtain input and feedback

### *Interventions might include AS MUCH...*

- Creation of an involved community group (such as a friends group), to work with the site's management structure

### *Strategies and actions should include AT LEAST...*

1. Create a management structure to oversee and delegate responsibilities for the site
  - Establish an administrative body to work with the Carbon County Parks and Recreation.

### *Strategies and actions might include AS MUCH...*

1. Local community will be involved in the management of the site
  - Establish a partnership with a new or existing group to spearhead community efforts with site maintenance and operations.

## **Illustrative Project #6: Joint Management Partnerships**

Catherine Keller

The public engagement process highlighted that there is strong interest from a variety of stakeholders in what happens to the Switchback Gravity Railroad's 18-mile site and that it is a complex landscape to manage. In light of this, a policy recommending the creation of a comprehensive management plan is presented as a means of assembling a set of standards, which will assure the proper conservation and preservation of the site's historic structures and natural landscape. The recommended actions articulated below can be used as vehicles to sustain this policy. An administrative body should be established to execute the proposed comprehensive masterplan for managing Mauch Chunk Lake Park, which includes the Switchback Gravity Railroad site. This body, in concert with the Director of Carbon County Parks and Recreation, would have the overall responsibility for coordination and oversight along with delegation of work associated with the management plan. The second action, creation of a "Friends of the Switchback" group, addresses how the community values the site and has a strong interest in how it is managed.

### *Composition of Administrative Body*

When selecting the organizations that will comprise the administrative body the essential requirements are the ability to grasp the "big picture", navigate the political landscape and secure financial resources. Based on the data culled from the stakeholder meetings the most logical candidate at the federal level for inclusion in the administrative body is the National Park Service. NPS has an active presence in the region and is currently functioning in an advisory capacity to various organizations involved with the trail. Their involvement in the administrative body in an advisory capacity will bring a level of sophistication to the management process. Knowledge of potential funding sources available within the federal government and experience managing large tracts of land with multiple owners is also a benefit they bring to the table.

At the state level, the Pennsylvania Department of Conservation and Natural Resources and the Delaware and Lehigh National Heritage Corridor stand out as excellent candidates for inclusion in the administrative body. These organizations, like the National Park Service, currently operate in an advisory capacity to the Carbon County Office of Parks and Recreation. Inviting representatives from both these organizations to participate in the administrative body would bring management, resources and experience. The D & L has already contributed constructive advice by pointing out the need for a comprehensive master plan for the park and by suggesting that the county explore "Open Space Funding" grants issued by the state. Incorporating local government into the administrative body is an obvious choice since the management of Mauch Chunk Lake Park is the responsibility of the Carbon County Office of Parks and Recreation.

Funding at the county level is at an all time low for the Park, and available resources are being channeled to the maintenance of areas associated with Lake Mauch Chunk. Without county government support, resources will continue to be in short supply and priorities will be randomly set without a comprehensive master plan. On a positive note, if engaged they could be very useful in identifying and helping to procure financial resources available at the state level. Jim Thorpe is organized as a Borough, which is a self-governing entity similar in authority to a town. The Borough should be included as a potential partner in the administrative body but is currently viewed as ineffective, disorganized and politically impotent. Attracting the interest of this group and empowering them to exercise what clout they have would be a means of assuring the community's voice is represented within the administrative body.

### *Composition of Friends of the Switchback*

Throughout the process of public engagement, it is clear that the Switchback Gravity Railroad Trail is valued in multiple ways by many stakeholder groups. This strong interest and enthusiasm should be harnessed into a formal structure tasked with spearheading the organization and coordination of community efforts on behalf of the site. This "Friends of the Switchback" group would also play a supportive role to the administrative body by working to address issues identified by the body that could be delegated to volunteers. The diverse stakeholder groups heard from during the public engagement process should be invited to participate in the "Friends of the Switchback."

## Summary Recommendations

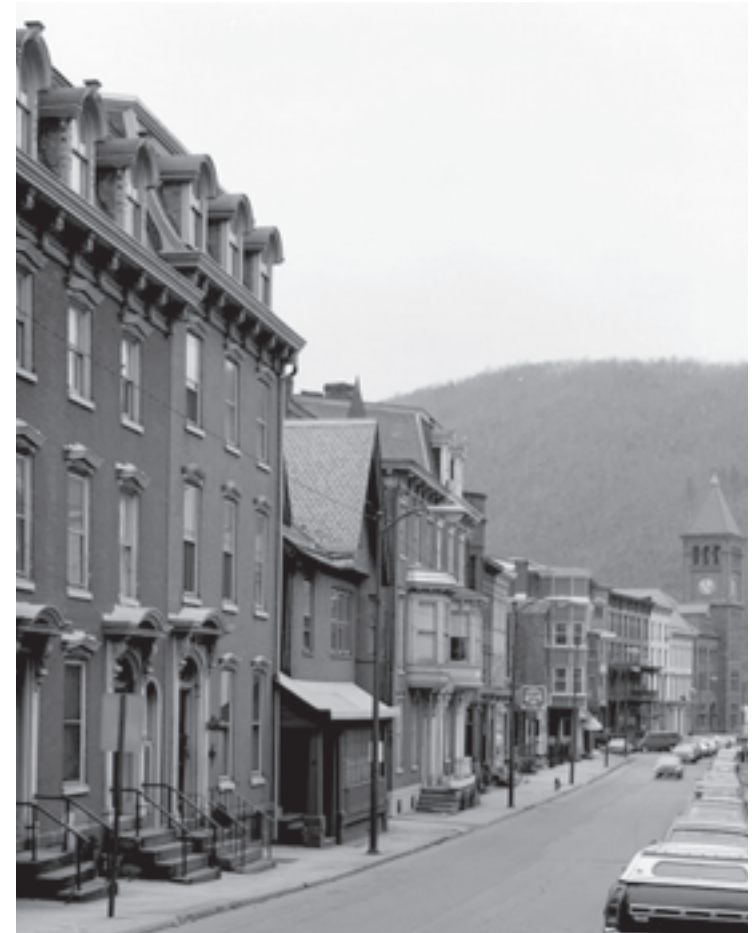
The most appropriate course of action for the Switchback Gravity Railroad, as reflected in the preceding policies, is preserving existing resources while improving vital infrastructure to ensure that the site remains open and accessible to the public. Preservation of significant historic and environmental resources comes first, and improvements, to the extent they are contemplated, should only increase access within a strict policy of preservation. Construction or development on the site that would damage its existing historic and natural resources, or produce clearly negative impacts on the surrounding community, are not endorsed. The Switchback Gravity Railroad Foundation's proposal to build a funicular on the Pisgah Plane has the potential to interfere with historical, natural and contemporary social resources, and falls outside the scope of actions recommended in this study.

Preventative conservation methods should be initiated to stabilize, reveal and maintain the remaining historic ruins. The historic fabric and trail should be fully documented in a professional capacity. Such documentation, including photographs, narratives, and a collection of oral histories will serve as a permanent record of the site's current state. Maintenance of the current Switchback trail should include erosion control and other environmentally-conscious improvements for hikers and bikers. That said, the use of ATVs and other motorized vehicles should be banned from the trail. Utility and emergency vehicles associated with the duties of the Carbon County Parks and Recreation Department should be the only motorized traffic allowed on the site.

There should be an effort to increase awareness of the significance of the Switchback as both a historic and cultural site. The creation of more user-friendly maps and brochures will allow visitors to more easily navigate and understand the trail and historic fabric. Interpretive and directional signage at pivotal trail points would also ease the visitors' experience.

Access to the site is fundamental to the visitors' experience and understanding of the Switchback. Increased access, by means of improvements to the existing trailheads or the creation of alternative routes should be evaluated carefully, and with a long-term development horizon. Such alternate routes should have minimal, incremental impact on the existing environment. Regardless, the current multi-use of the site should be maintained, and the County Parks Department should encourage the continuance of legal uses, such as walking, hiking, and biking.

The public engagement process highlighted the strong interest of stakeholders in the future of the Switchback Gravity Railroad's 18-mile site. Stakeholders identified in this study included the usual sorts of agencies, advocates and professionals representing historic preservation, natural resource protection, recreational activities and the business community and also tapped in to the consciousness of the general public (particularly in Jim Thorpe). With such a diverse collection of outspoken stakeholders, this site is a complex landscape to manage. To ensure the successful implementation of all recommendations, a cooperative management structure should be organized. This structure would begin with the formation of an administrative body (a "conservancy" or "user's cooperative"), working in an advisory capacity with the Carbon County Parks and Recreation Department. The administrative body would take on the responsibility of creating a comprehensive management plan and articulate a holistic approach to



Looking North on Broadway toward Courthouse Square, 1979 (HABS)

## Summary Recommendations

managing the entire SGRR landscape, which if followed will assure the proper conservation and preservation of the historic structures and natural landscape. Once a comprehensive plan is developed this body would have the overall responsibility for coordination and oversight; including delegation of the work associated with implementing the management plan. As a means of addressing the community's appreciation of the site and their strong interest in how it is managed, a "Friends of the Switchback" group should be formed to spearhead and coordinate community efforts relating to the site. This group would play a supportive role to the administrative body and would consist of partnerships formed out of some of the diverse stakeholder groups heard from during the public engagement process.

The proposal of the Switchback Gravity Railroad Foundation to construct a funicular and associated tourism facilities for the Mt. Pisgah Plane/Summit warrants particular attention, as it has garnered significant attention within the community and formed an important part of the background for this study. The Foundation's proposal aims to build new structures on the Mt. Pisgah Summit and to recreate a rail system, commonly referred to as a funicular, on the historic incline plane to provide access to the summit. This attraction would bring a significantly greater number of people to the Summit and Plane, and the transportation infrastructure would be supported by reconstructions of a few historic structures (of which only foundation ruins are extant) to provide visitor services. The SGRRF expects the whole proposal to generate a positive flow of direct economic benefits (an operating surplus). In its current state, the proposal is a brief outline of means and ends—site plans, building designs, specifications, cost estimates or management arrangements are not detailed.

The rationale for the project combines preservation and interpretation of the SGRR as well as economic development. While not included in the Foundation's preliminary plans, Foundation president John Drury acknowledges that further, detailed economic and engineering studies are necessary and as yet undone. Mr. Drury has stated in stakeholder meetings that funds accrued from funicular operations will be directed to maintenance of the trail. He has also reported that State Representative Keith McCall will earmark funds for the funicular's construction once these impact studies are produced and are found to favor the feasibility of the project.

In light of the policies, actions and strategies devised for the entire SGRR site, this study does not support the Foundation's proposal. The new construction referenced in the proposal exceeds what we believe should be acceptable negative impacts on the historical integrity, natural resources and contemporary social values of the SGRR landscape. Further, our study leads to doubts about the financial feasibility of the project, and raises questions about how economic benefits would flow among the different partners and stakeholders. Several different aspects of the proposal, and likely impacts, contribute to our determination:

- The construction would damage valuable historic resources on the Mt. Pisgah Plane and summit. Even though these historic resources have little integrity, the extant ruins and landscape features warrant a non-destructive, preservation approach—sustaining and protecting their current configuration while continuing in use as a recreational trail. Their historic form as a transportation



Looking North on Broadway toward Courthouse Square, 2007

corridor would not necessarily be enhanced by creating a modern vehicular system (funicular, for instance); indeed, it is believed that such a project would be precluded under federal preservation guidelines (the Secretary of Interior's Standards and Guidelines) which, in addition to providing best-practice guidance,



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would come in to force if any federal funds or permits were required to construct the new transportation facility (which is likely). (Elsewhere in this report, further preservation and interpretive actions to make these historic remains better protected and more visible while continuing service as recreation resources is recommended.)

- The increased traffic and access generated by construction of a funicular or other transportation facility would compromise the environmental character of the Mt. Pisgah Plane, and perhaps the SGRR trail and other areas of the mountain more widely. These impacts would also be strongly felt (and likely resisted) by nearby residents (especially in the Heights), requiring sensitive design and probably some sort of mitigation.
- The clear lack of broader community support for the SGRR proposal must also be noted. Strong opposition is not in itself a reason to not support the proposal; however, the reasons for opposition are significant. It is understood that community groups and residents wish to prevent change to the current environment. A strict anti-change policy is not supported; it is believed that incremental improvements to interpretive and recreational infrastructure can well be accommodated without negatively affecting the experience of the SGRR landscape for its multiple uses.
- It is doubtful that the funicular proposal will yield positive economic benefits without significant public subsidy. As noted above, a federal subsidy is unlikely, given the fact that the SGRR is listed on the National Register of Historic Places and the current proposal would likely not pass the Section 106 review that would be required (and carried out by the Pennsylvania Historical and Museum Commission). Related to the community opposition—also noted above—it is unclear in the current proposal exactly who would build and manage a new facility, or who would benefit from and take responsibility for the financial aspects of the facility. Apart from the pragmatic and legal details to be worked out, the sharp political debate in the Jim Thorpe community over the perceived privatization of the SGRR landscape by the SGRR proposal is also noted. In the current environment and with SGRR acting alone, residents and community groups are very resistant to the idea that one fraction of the community (the SGRR) will benefit from the proposed new facility and exclude existing public use of the landscape.

Should the Foundation choose to revisit their proposal in the future it should be done so with the studio's policies in mind. It is important to note that the conclusions of this study are not against regulated increased access to the site or additional interpretation. But rather the group believes that the historical and environmental values should take precedence.

# Notes

- 1 Michael, Knies, Coal on the Lehigh: Beginnings and Growth of the Anthracite Industry in Carbon County, Pennsylvania, Canal History and Technology Press, Easton, PA: 2001.
- 2 Herbert C. Kraft, The Lenape: archaeology, history and ethnography, New Jersey Historical Society, Newark, NJ: 1986
- 3 Vincent Hydro, Jr. The Mauch Chunk Switchback: America's Pioneering Railroad. (Canal History and Engineering Press. Easton, PA: 2002
- 4 Hydro.
- 5 Ibid.
- 6 Knies, 39.
- 7 Hydro, 11.
- 8 Ibid., 16-24.
- 9 Miner's Journal, June 2, 1827, quoted in Hydro, The Mauch Chunk Switchback, 25.
- 10 10 Hydro, The Mauch Chunk Switchback, 112-114
- 11 LC&N Annual Report, January 12, 1829 as cited in Hydro, The Mauch Chunk Switchback, 84.
- 12 Hydro, 53.
- 13 Ibid., 55.
- 14 Ibid., 59.
- 15 LC&N Managers Minutes, June 12, 1844 quoted in Hydro, The Mauch Chunk Switchback, 63.
- 16 Hydro, 82.
- 17 Ibid., 85.
- 18 Ibid., 99.
- 19 Ibid., 122.
- 20 Ibid., 100.
- 21 Ibid., 109.
- 22 Peter Roberts, The Anthracite Coal Industry: A Study of the Economic Conditions and Relations of the Cooperative Forces in the Development of the Anthracite Coal Industry of Pennsylvania. (The New Era Printing Company: Lancaster, PA: 1901. 71.
- 23 The Molly Maguires were a secret society of disgruntled Irish coal miners. Once their trial was completed in 1877, the Maguires were sentenced to death. Hydro, The Mauch Chunk Switchback, 191.
- 24 Hydro, 191.
- 25 Ibid., 193.
- 26 Elaine Anderson, The Central Railroad New Jersey's First 100 Years: A Historical Survey. Center for Canal History and Technology: Easton, PA: 1984, 45.
- 27 Hydro, The Mauch Chunk Switchback, 196.
- 28 Ibid., 199.
- 29 Ibid.
- 30 Ibid., 208-214.
- 31 Ibid., 214.
- 32 Ibid., 222.
- 33 Ibid., 236.
- 34 Ibid., 242.
- 35 Mauch Chunk Lake Park Chief Ranger Jerry Healy and staff., interview by Mark Donofrio, 23 September 2007.
- 36 Ibid.
- 37 Ibid.
- 38 Varaly Associates, Carbon County Comprehensive Plan, 1998.
- 39 Carbon County, Zoning Ordinance of Borough of Jim Thorpe, Ordinance 19-12, 1997.
- 40 U.S. Bureau of the Census, Carbon County Census, 2000.
- 41 Pocono Mountain Visitors Bureau, <http://www.800poconos.com/static/index.cfm?contentID=242>
- 42 In 2006, the firm of Public Works on behalf of the behalf of the Alliance of National Heritage Areas (ANHA) used the Money Generation Model (MGM2) to determine the 2005 impact of heritage tourism on Carbon County. The MGM2 model is an update of the NPS Money Generation Model as originally developed by Ken Hornback. Daniel Stynes and Dennis Propst at Michigan State University developed the newer version—MGM2—in 2001.
- 43 "Horseshoe Curve National Historic Landmark," Railroaders Memorial Museum, <http://www.railroadcity.com/hc/index.php> (accessed December 17, 2007).
- 44 "Rails to Trails," Rails to Trails Conservancy, <http://www.railtrails.org/index.html> (accessed December 17, 2007).
- 45 "Lehigh Gorge State Park," Pennsylvania Department of Conservation and Natural Resources, <http://www.dcnr.state.pa.us/StateParks/parks/lehighgorge.aspx>. (accessed December 17, 2007).

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