Southern Indiana Trail

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Abstract

Southern Indiana has a geologic history that lends the landscape tremendous scenic quality. In addition to the meandering beauty of the Ohio River, the karst topography creates sinkholes, caves and rock formations found in Southern Indiana. The rolling hills and high overlooks, due to the lack of glaciation in this part of the state are indeed unique to Southern Indiana. Pulling all of these geologic phenomena together is the beauty of the reforestation effort in Southern Indiana in the early part of the twentieth century. With the concerted efforts of the CCC, the once heavily farmed, yet fragile hills, have been reforested; hence, the Hoosier National Forest, Harrison-Crawford State Forest, and many state parks. And the backbone of all is the mighty Ohio River. Given the conjugation of this natural beauty in Southern Indiana and the charming small towns interspersed in the area, it was logical that an extensive hiking/biking trail be designed to open the landscape for outdoor recreation. This thesis design project called for the landscape of Southern Indiana to be examined and explored in order to provide a diagrammed trail corridor along the Ohio River approximately 140 miles long. The trail is to be an avenue to provide recreational and educational benefit with ecological, geological, geographical, and natural interpretive sites accessed along the trail. In addition to the diagrammed long distance trail, the project focused in on one region for closer examination of trail analysis and alignment. The project focus site was Leavenworth, Indiana, where the trail corridor was designed in addition to trailhead and area access points in the town. Also, trail signage systems for the whole trail were designed.
Defining The Problem & The Project
Background

I have lived in Southern Indiana since the age of two. My fondest memories are of the camping and hiking experiences with my family in the state parks in and around the Southern Indiana region. Hiking was always the mainstay of our camping trips. As a child, hikes provided tremendous recreational challenges in climbing the hills, rock outcroppings, and steep creek-bank cliffs found in the parks of the region. As I was running, jumping, and playing, I internalized all of these landscape images. In turn, these images were recalled and explained by interpretive displays found in nature centers located in the parks.

This early exposure to outdoor recreation and education lasted into my adult life. In 1992 I travelled to Europe and hiked one of Britain's long distance footpaths; Pembroke National Trail in Wales, Great Britain. Of the 181-mile trail, I hiked six miles that followed the Atlantic Coastline (John, 21). The trail was an opportunity for me to learn and understand the British landscape far better than the numerous train rides and tours. In addition, the interpretive trail book helped me to better understand the landscape and landmarks I encountered. The book detailed the many access points and facilities available enabling me to plan a day hike. The long distance trail and the interpretive guidebook allowed me to learn and exercise in the Welsh landscape.

My love for the outdoor experience in turn fostered my choice to become a landscape architect. I have the desire to continue to provide and maintain landscapes similar to the ones in which I grew up. In the summer of 1993, I completed my internship in Colorado Springs, Colorado, and while I was there I was exposed to more trails. I learned about the Rocky Mountains and the landscape not just by being in the office, but by hiking the trails of the region. My hiking experiences included attempting a six-mile saddle hike between two Fourteener Mountains*, completing a six mile hike up Pike's Peak (a Fourteener), hiking a one mile interpretive trail through the Florissant National Fossil Beds Monument, and volunteering to help construct a one mile interpretive trail through different ecological communities in Mueller State Park.

After the summer was over, I found myself wanting to give the people of Indiana the same chance to experience their natural environment as I experienced in Great Britain and Colorado. I wanted to design a long distance interpretive trail through Southern Indiana. The trail I wanted to design would be approximately 100-150 miles long, connect significant landmarks, natural and manmade, in order to give understanding to hikers regarding the landmark and its place in time and the environment. This interpretive information would be provided via brochures or demonstration boards along the trail. Therefore, the intent and energy of this design and research project was to connect the small towns of Southern Indiana with unique natural and historic features of Southern Indiana via a long distance trail.

* Fourteener Mountain—a mountain peak over 14,000' in elevation in Colorado.
Problem Statement

Trails are valuable corridors connecting people from place to place while exposing them to elements of the natural environment not readily seen in our fast-paced mechanical world. In my experiences, after traveling long distance trails in other states and abroad, I came to the conclusion that trails offered a ready access into our natural environment lending a source of recreation and knowledge of the environment. Ironically, I had travelled many short trails in Indiana's state parks and recreation areas, but my greatest learning experiences and recreational challenges came from long distance trail corridors in other states and countries. In the state, Southern Indiana has the most diverse geological, geographical, and historical landscape opportunities to provide recreational and intellectual interest for a long distance trail. Yet, to this date, there is not a long distance trail through the Southern Indiana region that connects towns with natural and historic features. In reality this inadequacy in recreational opportunities in Southern Indiana may have been due to attitudes of state officials, citizens, and designers. If these people did not recognize or were not made aware of the necessity, the benefits, and the resource of a long distance trail, then obviously any endeavor to achieve a long distance trail was inconceivable.

Now, while I could and did not have the power to change these attitudes with the fell swoop of my hand, as a landscape architect I wanted to use my design project and research to show the value of long distance trails as a source of connection, education, and recreation. Yet, I recognized that a long term strategy for land acquisition and feasibility studies of such a trail would be necessary for final design and construction. However, these issues were not within the scope of my project. My project was a design ideal—an infant ideal that is to be passed to the Indiana Department of Natural Resources for further development and studies necessary to complete this trail. Also, the American Discovery Trail (ADT), the trail that will stretch from coast to coast, passes through Southern Indiana. A link to this trail was possible and therefor this project could be passed to ADT’s administrative team and the National Park Service, and they would complete the acquisition and studies necessary for final design and construction.

So, within these parameters, my project was to identify significant geological, geographical, scenic, and historical landmarks in the landscape and connect them via a long distance interpretive trail corridor from Evansville to Corydon, Indiana. Next, a segment of the trail, the focus site, was identified, further examined, and designed to provide connections, a trailhead, and a rest area.
Sub-Problems

The Long Distance Trail Diagram

In diagramming and designing the long distance trail there were many sub-
problems to be aware of. In addition to identifying the trail corridor there was the
challenge of unifying the long distance trail with signage*. The users of the trail,
their safety, and their orientation would be dependent upon trail signage and
direction. Consequently the signage designed would unify the trail through the
common identity of the signage. The signs were designed in the same spirit the
state parks of Indiana use signage to identify and unify their trail systems and
parks(see illustration 1A).

Secondly, there was the need for overnight accommodations for trail users.
Fortunately, in Southern Indiana there were existing National Forest and State
Forest facilities such as campsites, cabins, and inns(Indiana Recreation, 4-10). There
were also numerous small towns in the region that provided bed and breakfasts,
inns, or small motels for one-night stays(Indiana Road). With the trail diagram
these facilities were connected and accessed for hikers.

In addition, water and restroom facilities were recommended to be every four
hours apart by the NPS Handbook (6). These facilities were also identified and
connected by the trail diagram.

Next, access was an important subproblem of the larger project. According to the
NPS Handbook, "Accesses at varying distances along the trail should be provided.
The locations must be well thought-out so that users can choose trips of various
lengths" (6). Access locations were located so as to provide multi-length hikes.
Locations were also chosen to take advantage of existing infrastructures such as
parking and restrooms.

*Signage—a system of designed trailmarkers that would be similar in appearance, color, and markation.
The Trail Focus Site

A sub-problem of the trail focus site was a result of the site providing access to the trail. The access point was to be a designed multi-accessible trailhead. This included the provision of support systems: parking, restrooms, bike storage, trail map brochure storage and dispersal, picnic site, rest area, and signage. First, if there was an existing infrastructure for parking and shelter it was used. If the facilities did not already exist they were designed. Regarding signage; at the focus site, the signage of the large trail was integrated at the access point.

The design of the segment also included the design of the trail surface as part and parcel of the long distance trail through Southern Indiana. Many tested trail surfaces exist in the region. These surfaces were considered for my trail surface in order to remain vernacular and indigenous to the region, while other surfaces were looked at in terms of maintenance, durability, and accessibility.

Assumptions

Embarking on this project there were assumptions to be made. My first assumption was that the Indiana State Government had allocated the necessary monies for the completion of this trail. The Indiana State Department of Natural Resources had also provided for the necessary personnel to conduct feasibility studies, gain easement agreements with land owners, and oversee the construction and maintenance of the trail. In addition, approval for the connection and use of facilities in both the state parks and the national forest had been granted. Finally and most importantly, the desire and support for a long distance trail among Indiana residents was and is growing as evidenced by the citizen participation with the design of The American Discovery Trail and The Cardinal Greenway.

Purpose & Goals

With this design project there were two main goals I wished to fulfill. The goal of the design project was to depict a long distance trail in Southern Indiana and design a smaller trail segment that exemplified the character of The Southern Indiana Trail while providing access points to the trail. The first goal would make apparent to officials, citizens, and designers the value of a long distance trail. This group of people would be the first beneficiaries of my project.

Most importantly was the ideal goal of the project. Once completed, my design ideas would be passed to the Department of Natural Resources or the National Park Service and the interpretive long distance trail would be constructed in Southern Indiana. The trail would forge connections from towns to parks to landmarks to
outstanding natural features in the landscape. With these connections the hiker would be exposed to; geologic and geographic history of the landscape, Native American and pioneer history in the landscape, and ecological systems. The culmination of these histories and systems has created a unique fabric in the landscape that can only be experienced in Southern Indiana. The trail, if constructed, would be the interpretive thread tying the histories and systems together while at the same time providing exceptional recreational opportunities for the hiker; the second beneficiary of this project.

Review of the Literature

A search of the literature for this project soon led me to the telephone. There are not many "how-to" books for trail design. Consequently my search began by telephoning the state forest service and parks office. These offices sent me information on the services, facilities, and recreational opportunities these organizations already provide in Southern Indiana. These offices also sent me literature and brochures focusing on technical and theoretical trail design guidelines. Most notably, the Trails Management Handbook from the Forest Service has been helpful in simply understanding the work required for a trail and the goal of trail design as it regards environmental and user sensitivity(5-8).

Another helpful tool was the Indiana Recreational Guide sent from the State Parks Office and the book Indiana. These resources provided extensive surveys of all state lands and related facilities in Indiana. This booklet was a jumping off point in understanding the number of established landmarks and facilities my trail project would connect. In addition, I had a map of Indiana depicting historical points of interest that could be connected along the trail(Map of Indiana).

Additionally, I contacted Keith Krueger, the Senior Landscape Architect with the Midwest National Park Service Headquarters in Omaha, Nebraska(Krueger). Our discussion led me to additional resources, and he also provided some National Park Service literature. Mr. Krueger sent me the NPS Trails Management Handbook. This handbook was a practical and ethical guide to trail location and construction. Mr. Krueger also suggested the AMC(Appalachian Mountain Club) Field Guide to Trail Building and Maintenance. While very similar to the NPS Handbook it was a more extensive view of trail design. Both books helped in depicting design guidelines and aesthetics for trail location and design.

Soon after collecting this literature, my advisor, Anne Henderson, lent me the books Trails for the Twenty-First Century: Planning, Design, and Management Manual for Multi-Use Trails and Greenways: A Guide to Planning, Design, and Development. These books gave me guidance for defining this design project and defining its direction and parameters. Consequently, all of these resources led me to feel confident in the viability of long distance trails as excellent sources for
recreation and learning. In an article from the *Trailblazer: Rails to Trails Conservancy*, the interest in hiking and biking trails was and is on the increase in Indiana(4). This citizen interest, coupled with the likelihood of a connection to the American Discovery Trail, made it apparent that the value of the Southern Indiana Trail project was unquestionable.

**Client & User**

Two goals were identified in the Purpose & Goals section of this report. With these goals there were also two beneficiaries of my project. The completion of the design project in the spring semester was aimed at attempting to educate the residents, designers, and state officials of the recreational and educational importance of a trail in Southern Indiana. The beneficiaries of this stage of my project I called my clients. They were the ones I was attempting to "sell" the idea of the importance of a long distance trail.

On the other hand I had the larger and more important beneficiary of my trail design—the user; heretofore named as the hiker. I termed these beneficiaries as the most important because if the trail was constructed they would be the sole inheritors and users of the trail. The ultimate conclusion of my project would be the placement of an interpretive trail in Southern Indiana. The ultimate success of the interpretive trail would be the acceptance and use by the hikers. Therefore the trail was tailored to hikers and their experience in the landscape.

The hikers the trail was designed for were the same people I had observed in other outdoor recreation facilities. Given my experiences of hiking and camping in the state parks and recreation areas in Southern Indiana, the people I had observed in these settings were a fair representation of the people who would also use the long distance trail. These people ranged from senior citizens to children (high school aged to toddler), from young adults (20 to 30 years old) to middle-aged adults (30 to 55 years old), and from able to disabled individuals in all groups. The major commonality of these people was the desire to be outside, observing, exercising, and learning within the context of their surrounding environment.

**Data & Methodologies**

In order to place the trail corridor successfully into the landscape in Southern Indiana, there was data that first I obtained and then interpreted for the best placement of the trail. To begin, I used the historic method of collecting previously used and documented trail design guidelines such as the ones from the National Park Service and the State Forestry Service. These guidelines were interpreted and applied to my design.

Directly related to existing trails and their success was my desire to use, observe, analyze, and photograph an existing trail in Southern Indiana. For example, by
using the descriptive survey method I attempted to visit a 27-mile footpath in the Harrison-Crawford State Forest near Corydon, Indiana. When I went to hike the trail, I was met with failure. The trail is unclearly or not at all marked where the maps located access points. At one point I found a linear clearing in the woods and started hiking only to have it end at a road crossing. I then discovered, from observation of a few orange flags in the grass, I had been "hiking" an underground utility easement. So, while I did not get to hike that particular trail to observe trail qualities and features, I continued to draw upon my previous experiences of hiking. I did, however, take with me from this trail experience the absolute need for clear, accurate trail signage. In addition to gathering information of existing trails, I traveled the region to find the focus site. I traveled through the Southern Indiana region via Scenic Route Highway 66. Highway 66 closely followed the Ohio River, accessed small towns, and allowed a close look at amenities in the area. Following this highway enabled me to carefully choose the focus site as an access point to the trail from Highway 66.

Once these data were collected and the interpretation of the data became necessary, interviews with authorities in trail design were necessary to clarify the interpretation. An ongoing mentor/mentoree relationship was established between me and Anne Henderson, a professor in the Landscape Architecture Department at Ball State University. She had direct knowledge of and experience with the White River Trail Corridor through Marion County, Indiana. She also was the project manager for Cardinal Greenway, a 51-mile Rails-to-Trails project from Gaston to Richmond, Indiana (Cardinal, 4). Ms. Henderson's insight and knowledge in trail design were beneficial and necessary for my design project.

After gathering the data from the previous methods it was necessary to gather data directly related to trail location and design. Such data necessary was the purchase of maps. As recommended by the Forest Service in their handbook, USGS, aerial, and soils maps of the area were necessary for preliminary trail route layout (3:1). My intention was to obtain these maps as well as road and recreational maps of the Southern Indiana region. From this point the design process began.

**Design Principles**

When designing the long distance trail there were many principles to be upheld. My personal values and beliefs for the purpose of the trail defined the environmental concerns and hiker safety considerations that created my design principles.

To begin, I believed the trail was placed in the landscape to give children, adults, students, and recreationalists the opportunity to see the natural environment with little or no human impact. This trail provided, hikers could learn scientific, ecological, artistic, sociological, and climactic principles that defined and created the world we live in. In order to provide this opportunity, when the trail was laid out
and designed, all measures were taken to; prevent ecological damage, make any reparations necessary to heal any scars from the construction, and provide safety, challenge, and natural beauty for the hiker. Because of my experience in helping construct the trail in Colorado, I had first hand knowledge of the care that builders must take to protect and enhance the integrity of the natural systems and the hiker. When a trail is placed in the landscape the ecological systems become vulnerable to human wear and tear. Many principles of the environment were to be considered when the trail was designed. On this and the following pages is a listing from the NPS Trails Management Handbook of design guidelines, as well as some of my own, that I chose as important design principles in my project (Hooper, 12).

General Guidelines
The trail will be integrated into the landscape as an off-road trail corridor, unless use of roadways is necessary to maintain connection of the corridor.

Wildlife
Areas of critical or sensitive habitat should be avoided.

Trails should skirt areas where big-game species concentrate; however, trails should contain vistas, observation points, or overlooks for observing wildlife at a distance.

A trail should avoid areas where potentially serious impacts on plants or animals may occur.

Soils
Trails should be located on stable soils except where short sections, up to 50 yards, could be structurally contained and/or a relocation could create more conflict in construction and maintenance.

A trail should be routed around extended bedrock areas except where grade or possible scenic features make a crossing desirable.

Soil maps should be used to locate unstable soil areas and to identify feasible areas for trail location and construction.

Some soils are not suitable for trail tread and alternative material must be provided.

Scenery
A trail should be located to overlook streams and lakes but not be directly adjacent to the water's edge.
Topography
The alignment should follow the contours of the land and be generally curved.

Trail grades should be contoured to avoid steep topography where possible.

Steep topography may be integrated into the trail to provide challenge, but it should be considered only when impact will not damage the integrity of the land.

Major consideration must be given to soil types, climatic conditions, volume and type of use, and location when planning grades to ensure minimum trail erosion.

Revegetation
During the design process, adequate revegetation should be planned for cut-and-fill slopes, borrow pits, or other areas where surface vegetation has been removed.

Hiker Amenities & Safety
For recreational challenge the trail will be of varying difficulty and length with many access points to allow for choosing the degree of challenge.

For interpretive purposes, the trail should meander to take advantage of scenic panoramas and historic, cultural and natural resources.

Natural or existing features should be used to allow hikers an easy and quick crossing without breaking the continuity of a trail.

Accesses at varying distances along the trail should be provided.

Shelters and comfort stations should be provided where needed. Any structures placed along the trail should be visually aesthetic and/or screened.

Special attention should be given to the problems that traffic and traffic-related noise could create for hikers.

When roads are crossed at grade, adequate sign marking and visibility must be provided.
Trails should provide water access points for hikers. Water should be available every one to four hours of travel.

Rockslope slopes and abrupt or unexposed cliffs should be avoided.

Severe wind corridors and lightning prone areas should be avoided.

Overnight accommodations should be provided every 8 to 10 miles.
The Design
Programmatic Statement

In achieving the goals set forth in this project, the design project was programmed in three phases: 1. The Southern Indiana Trail Diagram, 2. The Oxbow Bend Trail Segment, 3. The Leavenworth, Indiana, Trail and Rest Area.

The Southern Indiana Trail Diagram

The trail diagram was a regional map locating the ideal long distance trail through Southern Indiana. The trail diagram connected towns, facilities, points of interest, and access points. The trail diagram through southern Indiana was determined by the following requirements:

* Indicates features found existing in the Oxbow Bend region which led to the choice of this region as the focus site.

- the trail would generally follow the Ohio River from Corydon to Evansville, Indiana
- the trail would connect points of interest;
  - outstanding scenery*
  - challenging topography*
  - historic sites*
  - unique geologic occurrences*
- the trail would connect small, historic towns*
- existing facilities were to be connected by the trail
  - restrooms
  - parking*
  - drinking water*
  - overnight accommodations*
  - camp sites
- the trail would offer multiple accessibility; bikes, hikers, and wheelchairs would have access at a variety of points along the entire 140 miles (the points of multiple accessibility would be indicated on the diagram and recommendations made for accessibility)
- the trail would have numerous pedestrian and vehicular access points to allow for a variety of hiking lengths (e.g. 1/2 day hikes, day hikes, overnight hikes)
The Oxbow Bend Trail Segment

Once the large trail was diagrammed it was my intent to move towards a smaller area, the focus site. The Oxbow Bend area was chosen due to the fact that the area possessed many of the qualities previously listed as requirements for the whole trail corridor. The qualities indicated with * are found in the Oxbow Bend region. This region covers approximately 13 miles of the trail corridor. The trail corridor through the Oxbow Bend region and Leavenworth was determined by the following requirements:

-the trail would offer multiple accessibility through Leavenworth; hikers, bikes, and wheelchairs would be able to move through the surrounding landscape, view the river, go to town, and access the roadside park/picnic area*
-the trail would connect Artists' Point, Fredonia, Old Leavenworth, Leavenworth, the Overlook, and the Highway 62 roadside park/picnic area
-the trail would include a hikers' rest area*
  picnic area*
  information
  overnight hiker registration
  parking*
-the trail would access the river shoreline*
-the trail would have access to Highway 66 and 62*
-the trail would promote and have access to Leavenworth amenities*
  Overlook Restaurant
  Ye Olde Scotts Inn Bed & Breakfast
  Bank
  Post Office
  City Hall

The Leavenworth, Indiana, Trail and Rest Area

Once again, the scale of the project was further focused. This time the qualities previously indicated with * were the qualities Leavenworth was chosen for closer examination and design. With these qualities in mind, the trail in Leavenworth was to connect the important nodes of the town while also providing a place of rest and access for hikers. The hikers' rest area was intended as a place of rest, orientation, registration, information, and interpretation. The trail and rest area were to be designed by the following requirements:

-the trail would connect The Overlook, Old Leavenworth, Leavenworth, and the roadside park
- the trail would offer interesting natural features for interpretation
- the trail would offer significant historic site interpretation
- the trail would offer scenic views
- the rest area would accommodate approximately 5-25 hikers/day coming to the Southern Indiana Trail
- the rest area would provide shelter, approximately 800 sq. ft, that would house:
  trail information
  maps
  overnight hiker registration
  drinking water
  historic and natural information of the region and town
- the rest area would offer day and overnight parking for approximately 15 cars
- the rest area would be a multi-accessible trailhead for wheelchairs, bikes, and hikers
- the rest area would provide for or be a connection to bicycle rental
- the rest area would have picnic grounds
  picnic shelters (5, each 100 sq. ft)
  picnic tables (5 wooden)
  grills (permanent)
- the rest area and trail would have signage designed and integrated from the signage designed for the entire long distance trail

**Site Location**

The site chosen for the 140 mile long distance interpretive trail generally followed the Ohio River from Evansville, Indiana, to Corydon, Indiana. Along this 140 miles, 13 miles was chosen to be examined more closely for inventory and analysis regarding trail corridor location. The 13 mile stretch chosen was located along the Oxbow Bend of the Ohio River. From approximately just south of Fredonia, Indiana, around the bend to just east of Leavenworth, Indiana. For further design and masterplan purposes, the roadside park on Highway 62 and a historic building in Old Leavenworth were chosen for the Hikers’ Rest Areas to provide all the facilities detailed in the program statement above (See Illustration 2A, page 16).
Illustration 2A
Site Location of Southern Indiana Trail (32” X 40” Board, marker on trash over foamcore).

Leavenworth Site Inventory and Analysis

Inventory and analysis was accomplished along the 140 mile trail by documenting existing landmarks and facilities with an icon system. The icons identified many resources, existing and potential. Then the icons, identifying the resources, were placed through the region and then the best corridor connecting the landmarks and facilities was diagrammed. The icons designed and used for inventory and analysis for the project can be seen in Appendix 1.

Once the trail diagram was accomplished it was then time to choose a focus site from the large trail analysis. The area chosen was a 13 mile trail segment around the Oxbow Bend (See Illustration 3A, page 18).

The Oxbow Bend region offered excellent viewsheds of the Ohio River and neighboring Kentucky.* The region also contained the towns of Fredonia and Leavenworth. Leavenworth provided many creature comforts for hikers. The region also was a connector between the Hoosier National Forest (HNF) and the Harrison-Crawford State Forest (H-CSF). The trail through this region would be a great connector of natural and historic resources. The Oxbow Bend region also

* If this trail were to become a reality, it is my recommendation that the Kentucky viewshed be lawfully protected from development.
provided access to Highways 66 & 62 and Interstate 64. This provided the entry for travelers to begin their trail experience at the Oxbow Bend—the scenic centerpiece of the Southern Indiana Trail (See Illustration 4A, page 19).

With the Oxbow Bend region selected, inventory and analysis led to the discovery of placing a trailhead, access point, and information point in Leavenworth. Leavenworth sits in an ideal location. It is juxtaposed between the HNF and the H-CSF with only a 7-10 mile hike from Corydon, Indiana—Indiana’s Historical State Capital. This location could serve many hikers as a dayhike destination from Corydon or the HNF. Leavenworth could also be a starting point to begin a hike into one of the forests for an overnight hiking trip. And quite likely, Leavenworth could be a place of passing through—a rest stop or an overnight stop. Leavenworth could be the hinge or the loop for many hiking trips. To make the town’s situation better, it held some of the best scenic beauty and history of Southern Indiana.

While also providing creature comforts such as The Overlook Restaurant, Stephenson & Co. General Store, a post office, the town square with the old county hall, and Ye Olde Scotts Inn Bed & Breakfast, Leavenworth was once the county seat of Crawford County and has much history to share with hikers. It was one of the earliest towns settled in Indiana and served as an important break-of-bulk rivertown for inland settlements. The town had easy access to the river since the bluffs recede a small distance from the river shore. The town was settled in the narrow shoreline nestled among 300’ and 400’ bluffs. Yet, in the 1937 Great Ohio River Flood, the town of Leavenworth was all but destroyed. In turn, the townspeople moved the town high upon the bluff overlooking The Oxbow Bend. Still there today, the town is just outside the west border of the Harrison-Crawford State Forest accessing some of the most beautiful country in Indiana; while all that is left of Old Leavenworth, is the street grid pattern and four buildings—three that appear to be from the town center and one residence.

With all of this natural beauty and history of Leavenworth, it was important that as the trail meandered through the town this history be preserved. The important rivertown history of early Indiana would be shown to passing hikers by preserving the old buildings, street grid, and character left of Old Leavenworth while also accessing the new town perched on the bluff. Leavenworth, today, is the quintessential small, isolated, Indiana rivertown. Most importantly, tying the two towns together is the grandness and serenity of the Ohio River; the largest natural history feature of the town. The trail through Leavenworth would be the tool to expose hikers to this unique history.

Not only did Leavenworth offer these historic and natural qualities, but there were important existing infrastructure and facilities the long distance trail tapped into. Leavenworth had easy vehicular access from Interstate 64 to Highway 66 and 62. These major roads would lead hikers into the town to the trailhead. In addition the roadside park along Highway 62 and the historic buildings of Old Leavenworth served the trail as a hikers’ rest area as well as an access, information, and facility point.
Illustration 3A
Analysis and Inventory of Southern Indiana.
Also masterplan of 140 mile Southern Indiana Trail indicated with orange line (21' X 8'
Board; GIS Maps on cardboard).
Illustration 4A
Analysis and Inventory of the Oxbow Bend Region; Fredonia and Leavenworth, Indiana (52" X 52" Board; Aerial Photo Blueline on cardboard).
Concept 1

As the trail wound through Leavenworth there were many options to consider. Location of the hikers' rest area was a key priority in order to enable hikers access to the town's facilities, historic sites, lookouts, scenery, and Ohio River access. The first concept considered was locating the rest area at the roadside park along Highway 62. The park already provided picnicking, a shelter house, highway access, proximity to town, and a potential scenic overlook. However, the park was quite narrow given the steep terrain and offered minimal parking. In order to meet the programmatic statement requirement, it would be nearly impossible and quite irresponsible to attempt to allocate parking, restrooms, bicycle rental, safe access (vehicular and pedestrian), and trail information in this one site.

Concept 2

The second concept was considered. The old buildings left in Old Leavenworth could possibly house the necessary trail information and restrooms while providing shelter, accessibility (vehicular and pedestrian), historic interest and interpretation, and Ohio River access. On the other hand, Old Leavenworth is quite an uphill hike from the town's facilities and would be an obstacle in providing multi-accessibility. Also the views from the Ohio Bluff would not be taken full advantage of from the flood plain of Old Leavenworth. And finally, by providing all of the necessary functions for the hikers' rest area in one location, it may lead to overuse, traffic stress in the older part of town, and risk of future flood damage.

Concept 3

Finally, concept three attempted to be a combination and compromise of Concepts 2 and 3. Instead of trying to locate all of the functions of the hikers' rest area in one location it was wiser to spread the trail access and facilities between the two locations therefore easing future stress on either site. In this concept a division of services was needed.

In the roadside park these facilities were provided:
- trail access
- vehicular, pedestrian, and multi-access
- proximity to town
- picnic area
- shelter area
- parking
- restrooms
- connection to Leavenworth (Overlook Restaurant, Stephenson & Company, bank, post office, town square)
viewshed of Oxbow Bend from the park
direct access to Highways 66 and 62
drinking water
signage clearly displayed

In Old Leavenworth these facilities were provided:
Facilities of Old Leavenworth Site
  overnight hiker parking
  access to the Ohio River
  trailhead for loop trail within Leavenworth (possibly Fredonia)
  natural interpretive sites
  rock climbing site
  easy access to Highways 66 and 62
  multi-accessible to the building
  signage clearly displayed

Facilities of Trailhead Historic Building
  trail information
  overnight hiker registration
  restrooms
  historic interpretive sites
  bicycle rental
  drinking water
The Masterplan

The Southern Indiana Trail Diagram

Again, the trail masterplan was designed in phases. The large scale masterplan, more appropriately labeled as a diagram, encompassed the whole 140 miles from Evansville to Corydon, Indiana. The corridor was diagrammed on the same boards that the inventory and analysis were recorded (refer back to Illustration 3A; page 18). The trail forged connections from town to town to natural, scenic, historic, and recreational landscapes. The trail avoided road corridors except where it was necessary to use the established road easement for the trail to pass through. The trail integrated as many existing amenities found in the small towns and surrounding landscapes such as parking, lodging, camping, food, water, phone, etc. The most important criteria the trail diagram fulfilled was to give hikers access to the most scenic sites while following the Ohio River. Along the way many treasures of the Southern Indiana landscape were discovered for the hiker.

The Oxbow Bend Trail Segment

After the analysis of the Oxbow Bend region many points of interest were defined for connection. These connections are detailed in the following narration of the Masterplan, Illustration 5A; page 23. Leaving Alton and beginning from the south of the Oxbow, the trail came upon Artist Point. Approximately 275’ up from the river, this is a phenomenal overlook of the Ohio River and the Oxbow Bend. The trail continued around the bend following the Ohio Bluff along the Indiana side of the river. The Ohio Bluff is consistently 250-300’ above the river’s surface going through Fredonia and Leavenworth. As the trail traveled through Fredonia it teetered between the edge of this very small town and the edge of the bluff. The trail moved closer to Leavenworth and parted ways. One trail stayed on the uplands into Leavenworth and the other moved down the bluff into Old Leavenworth. But shortly after this fork in the trail, there was also the option to split again from the upland trail and go back toward Alton via the Hoosier National Forest.

If one continued on the upland trail to Leavenworth, one came out of the forest into agricultural land and The Towers Orchard, then back into the forest of the Harrison-Crawford State Forest, then closely followed Highway 62 as Leavenworth came into view. The trail crossed the highway into town where one passed Ye’ Olde Scotts Inn Bed & Breakfast, city hall, Stephenson & Co. General Store, and the post office. As one left town the trail treaded through a few of the homes in the neighborhood and then crossed the highway again and dipped into the forests on the bluff’s edge. The trail gradually climbed until one encountered a trail of steps or a long switchback climb up to the roadside park. Once at the park a hiker would find a shelterhouse, picnic tables, water, restrooms, information, parking.
and places to sit and rest. As the upland trail left Leavenworth it rejoined with the
trail from Old Leavenworth and continued on to the Harrison-Crawford State Forest
and Corydon.

However, if back at the fork in the trail one went down the bluff into Old
Leavenworth one would follow the old scenic highway just on the river’s edge into
the old town. What would strike a hiker the most being in the bottoms of the Ohio
River is the sheer lazy largeness of the Ohio River. The river simply dominates the
landscape with the great limestone outcroppings and cliffs of the bluff as a backdrop.
As one continued on, the old streets of Leavenworth were noticed. A few old
buildings from the main street are left. And down the street, toward the river, is a
refurbished historic building, now the trailhead. The trail here offered two options;
either continue along the bottoms to the mouth of the Blue River where the trail
eventually met up with the upland trail, or take the challenge of the Ohio Bluff and
climb upward to meet up with the trail at the roadside park.

Illustration 5A
Masterplan of Southern Indiana Trail at the Oxbow Bend through Fredonia and Leavenworth, Indiana
(52” X 52” Aerial photo blueline prints on cardboard).
Leavenworth Trailhead and Roadside Park Masterplans

After the masterplan of the Oxbow Bend was completed pieces of the trail in Leavenworth were examined and designed more closely to fill the needs of hikers in the program set forth. As discussed in Concept 3, the historic building in Old Leavenworth and the roadside park were seen as existing facilities that could fulfill the program requirements. Consequently, these areas are depicted in further detail and design.

First, the historic building, presently not on a historic register, in Old Leavenworth was designed as a Trailhead Information Center. In this building hikers would obtain trail information, register for overnight hiking, visit interpretive displays of the history of Old Leavenworth, talk with a ranger, get a drink of water, and use the restroom. Consequently, this access point served as a beginning point for hikers. Therefore, parking was provided for both day and overnight hikers. Also, the trail through Old Leavenworth would be an asphalt surface in order to be multi-accessible within the town and also reminiscent of the sidewalks that may have lined the streets of Old Leavenworth at one time. To understand this narration more fully, please refer to Illustrations 6A and 6B; page 25.

Secondly, the roadside park on Highway 62 was designed to better provide vehicular and pedestrian access to the trail as well as provide a rest area for hikers. At the roadside park there was a beautiful old shelterhouse built by the Civilian Conservation Corp. With some refurbishment it would be a nice place for gathering and resting along the trail. The roadside park also provided picnic tables and parking for those simply visiting the park or beginning their hike. The park also had two overlooks. One overlook was visible from the picnic grove and accessible to anyone. The other overlook was a challenging hike, but still accessible, through the woods along a switchback on the Ohio Bluff. The trail surface in the park was an asphalt surface as it came from Leavenworth, but as it left the park it became a narrower footpath with a compacted soil base. Also, the trail surface to the overlook on the bluff was a compacted soil/gravel mix so as to be challenging yet accessible. Illustrations 7A and 7B; page 26 depict the previous narration.
Illustration 6A
Masterplan of Trailhead in Old Leavenworth (32" X 40" Board, marker on trash over foamcore).

Illustration 6B
Sketch of Historic Building and Trailhead (32" X 40" Board, marker on trash over foamcore).
Illustration 7A
Masterplan of Roadside Park and Trail (32" X 40" Board, marker on trash over foamcore).
Illustration 7B
Sketch of Roadside Park shelterhouse and trail (32" X 40" Board, marker on trash over foamcore).
Signage

The last piece of the project was to design a signage system for the entire trail. The signage was to give the trail identity, make it easy for hikers to find and follow the trail, give direction, and information of upcoming sites to see. To perform these functions the signage was of two forms: Trailhead Signage and Trail Information Signage. Trailhead Signage features the logo and was used to identify trail access points. This signage was also used on promotional literature for the trail and roadway signs, thus giving the trail a “look”--an identity easy for hikers to recognize. Secondly, Trail Information Signage was signage placed on the trail for hikers to find their way. This signage utilized an icon system with similar colors and lettering of the Trailhead Signage in order to be recognized by the hiker. The icons used were derived from the Analysis Icons used in the inventory and analysis process. Icons relative to the hiker were siphoned from this list and consolidated into Trail User Icons in Appendix 2. One can see in Illustration 8A the different icons identified for the hikers and utilized on the Trail Information Signage. However, the icons chosen were only relative to the trail as it moved through the Oxbow Bend Region. If the trail were designed for the entire 140 miles this collection of Trail User Icons would have to be expanded.

Illustration 8A
Southern Indiana Trail Trailhead and Trail Information Signage (32” X 40 “ Board, marker on trash over foamcore).
Conclusion

Despite the recreational and educational opportunities in Southern Indiana, a long distance interpretive trail connecting the region is an amenity yet to be offered. A trail of this extent and character could lend residents and visitors a unique view of the landscape that is Southern Indiana. As of now, a hiker can catch glimpses and parcels of Indiana's landscape within the state parks, forests, and Hoosier National Forest. With the long distance trail proposed, the regional character, history, and beauty of the Southern Indiana landscape will be available to hikers of all ages. When this project is completed a long distance interpretive trail will be blazed through Southern Indiana uncovering the natural history and beauty that I have grown to experience, learn about, and appreciate.
Bibliography

Books


Hedge, Christine. *Indiana*. Department of Natural Resources. Indianapolis, Indiana, 1986.


**Pamphlets**

United States. Department of Natural Resources. *Adventure Hiking Trail.* Indianapolis, Indiana.


Miller, Brian K., Georgia L. O'Malley, and John R. Seifert. *Forests and Our Environment.* Department of Forestry and Natural Resources, Purdue University. West Lafayette, Indiana, 1993.


**Articles**


Interviews


Maps

Indiana Road Map. Map. H.M. Gousha Company. San Jose, California.

Analysis Icons

Cultural Features

Land Use: Urban or Built-up Land  #1-7

1. Residential land use: characterize as older, established neighborhoods, or newer subdivisions.

2. Commercial Land Use

3. Industrial Land Use

4. Transportation Corridor

5. Mixed Urban Uses (residential and commercial etc.)

6. Parkland & Public Open Space

7. Schools

Land Use: Small Towns & Rural Settlements  #8-11

8. Small towns laid out on a grid (usually having single family homes and a modest "main street")

9. Mobile Home "Farmettes" (5 or so acres)
10. Single Family Home "Farmettes"

11. Rural Subdivisions

Land Use: Agricultural Land #12-14

12. Cropland (corn, soybeans, etc.)

13. Pasture (grass for horses, cattle)

14. Orchard and Groves

Land Use: Man-Made Water Features #14-17

15. Reservoirs

16. Farm Ponds

17. "Pay" Lakes

Land Use: Man-Made Barren Land #18

18. Quarries, sand and gravel pits
Land Use: Forestland #19

19. Woodlots

Natural Features

Forested Land #20

20. Deciduous Forest

Water #21-24

21. Rivers and Streams

22. Lakes

23. Swamps and Bogs

24. Floodplain

Wetland #25-26

25. Forested Wetland

26. Non-forested Wetland
27. Rock Outcrops
28. Caves
29. Sinkholes

Physiographic Features #30-33

30. Bluffs
31. Valleys
32. Rolling Hills
33. Flat Areas

Elevation #34-35

34. High Points
35. Low Points

Slope #36

36. Steep Slope
Visual Features

Scenic Views and Strong Visual Elements  #37-43

37. Agricultural-Open

38. Forest-Enclosed

39. Water features-natural

40. Water features-man-made

41. Typical Rural Settlement (easy to "read" in the landscape and give a strong visual image)

42. Typical Urban Settlement Pattern

43A. Transportation corridors and elements—bridges

43B. Transportation Corridors and elements—interchanges

Problems

Sights  #44-52

44. Garbage, litter, dump sites
45. Weeds, Brush

46. Views obstructed by vegetation

47A. Pollution--agricultural

47B. Pollution--industrial

48. Derelict agricultural complexes

49. Derelict residential areas

50. Derelict commercial areas

51. Derelict industrial areas

52. Abandoned or "junked" vehicles (cars, busses, motorcycles)

Sounds #53-54

53. Heavy Traffic

54. Noise
Smells #55

55. Stagnant Water

Hazards #56-61

56. Dangerous crossings urban: pedestrian-vehicular conflict

57. Dangerous crossings rural

58. Soil Erosion

59. Flooding

60. Unfenced dogs-free to roam and chase

61. Unfenced livestock

Special Problem Areas #62

62 Lack of access to trail

Opportunities

Extra Property and Extra Width Property #63-74

63. Trailhead-parking only
64A. Reststops-no facilities (benches and bike racks)

64B. Reststops-shelters, bathroom, picnic areas

65. Reststops-shelter only

66. Camping Areas

67. Interpretive Areas (nature study and photography)

68. Interpretive Areas (cultural landscape study)

69. Gathering spaces for festivals, fairs, races, markets, concerts

70. Visitor Center-Trail Headquarters

71. Potential vehicular access: urban

72. Potential vehicular access: rural

73. Potential non-vehicular access: urban

74. Potential non-vehicular access: rural
Connections #75-81

75. To schools

76. To neighborhoods

77. To parks

78. To stores and services (food, lodging, phone, restrooms)

79. To other trails

80. To historic sites, landmarks, districts

81A. To cultural arts areas, museums, civic centers (tourist destinations)

81B. To hotels and motels (tourist destinations)

Protections Required #82-88

82. Scenic Viewsheds

83. Woodlots

84. Vegetative Cover (wildlife habitat)
85. Adjacent landowners livestock

86. Adjacent landowners visual privacy

87. Archaeologically significant sites

88. Historic Sites, landmarks, districts, settlement patterns
Trail User Icons

Cultural Features

1. Urban Town—population over 10,000; commercial and residential base

2. Rural Town—population less than 10,000; small, if any, commercial base

3. Agricultural or Mining Sites—orchards, farms, quarries

Natural Features

4. Forests

5. Water/Wetlands—characterize as accessible or not accessible

6. Distinctive Landforms—bluffs, valleys, caves, etc.

Visual Features

7. Scenic View
Problems

8. Flooding Potential or Danger

9. Road Crossing

Opportunities

10. Parking

11. Services--food, phone, lodging, restrooms

12. Rest Stops
   * = No facilities (benches and bike racks only)
   ** = Shelters only
   *** = Shelters, bathrooms, picnic areas

13. Interpretive Area--historic or natural

14. Trailhead and Information

15. Camping--characterize as primitive or trailer facilities

16. Wheelchair Accessibility--characterize as easy, medium, or challenging