

# *Greater Kingston Area Trail / Greenway Feasibility / Master Plan*



January, 2011

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**January, 2011**





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# TABLE OF CONTENTS

<b>Chapter/Section</b>	<b>Page</b>
<b>1.0 Executive Summary</b> .....	1-1
<b>2.0 Introduction</b>	
2.1 Study Purpose .....	2-1
2.2 Demand for and Potential Use of Trail .....	2-1
2.2.1 Project Service Area .....	2-1
2.2.2 Community Character .....	2-1
2.2.3 Population Information and Demographic Patterns .....	2-5
2.2.4 Profile of Potential Trail Users .....	2-7
<b>3.0 Background Information</b>	
3.1 Description of Study Area .....	3-1
3.2 Regional History .....	3-1
<b>4.0 Existing Conditions</b>	
4.1 Current Trail System .....	4-1
4.2 Existing Land Use .....	4-2
4.3 Topography .....	4-2
4.4 Natural Features .....	4-2
4.5 Wildlife Habitat .....	4-3
4.6 Key Destinations .....	4-3
4.7 Property Ownership .....	4-3
4.8 Environmental Contamination .....	4-3
<b>5.0 Trail Planning Process</b>	
5.1 Trail Planning Consultants .....	5-1
5.2 Geographic Information System (GIS) Database .....	5-1
5.3 Public Participation	
5.3.1 Public Meetings .....	5-1
5.3.2 Trail Steering Committee Meetings .....	5-1
5.3.3 Key Person Interviews .....	5-2
5.3.4 Public Survey .....	5-4
5.4 Development of the Trail Master Plan	
5.4.1 Project Goals and Methodology .....	5-7
5.4.2 Identification of Key Destinations & Trail Connections .....	5-7
5.4.3 Identification of Potential Trail Corridors .....	5-7
5.4.4 Identification of Proposed Trail Route with Alternatives .....	5-7
5.4.5 Identification of Property Owners .....	5-7
5.4.6 Physical Inventory and Assessment .....	5-8
5.4.7 Selection of Preferred Trail Route .....	5-8
5.4.8 Prepare a Trail Concept Plan .....	5-8
5.4.9 Final Design and Report .....	5-8

<b>6.0</b>	<b>Proposed Trail / Greenway System</b>	
6.1	Proposed Trail / Greenway Overview .....	6-1
6.2	Kingston Area Trail .....	6-4
6.3	Back Mountain Trail Extension.....	6-26
6.4	Larksville Connector Trail.....	6-42
6.5	Market Street Connector Trail .....	6-47
6.6	Hopkins Memorial Park Connector Trail.....	6-51
6.7	Schuyler Ave Playground Connector Trail .....	6-55
6.8	Roosevelt Park Connector Trail .....	6-57
6.9	Forty Fort Connector Trail.....	6-60
6.10	O'Hara Park Connector Trail.....	6-63
6.11	Seminary Place Connector Trail .....	6-65
6.12	Luzerne County Park Connector Trail .....	6-67
6.13	West Side Vo-Tech Connector Trail.....	6-71
<b>7.0</b>	<b>Design Standards</b>	
7.1	Trails .....	7-1
7.1.1	Surfaces.....	7-1
7.1.2	Standard Trail.....	7-2
7.1.3	Rails with Trails.....	7-3
7.1.4	Sidewalks .....	7-5
7.1.5	Bike Lanes .....	7-5
7.2	Trail Intersections .....	7-6
7.2.1	Crosswalks .....	7-6
7.2.2	STOP Signs / Traffic Lights .....	7-7
7.2.3	Flashing Signals (Cross Alert).....	7-7
7.2.4	Refuge Islands.....	7-8
7.2.5	Rail Crossings .....	7-8
7.3	Auxiliary Structures .....	7-9
7.3.1	Barriers and Emergency Access .....	7-9
7.3.2	Pedestrian Lighting .....	7-9
7.3.3	Bridges .....	7-10
7.3.4	Underpasses .....	7-10
7.4	Trail Signage.....	7-11
7.5	Accessibility.....	7-12
<b>8.0</b>	<b>Trail Operation, Maintenance and Security Plan</b>	
8.1	Ownership/Maintenance/Management Options.....	8-1
8.2	Trail Maintenance .....	8-3
8.3	Trail Security .....	8-5
8.4	Proposed Roles of Public and Non-Public Agencies .....	8-5
8.5	Areas for In-Kind Contributions from Involved Entities.....	8-6
<b>9.0</b>	<b>Financial Feasibility Analysis</b>	
9.1	Cost estimate for any required land acquisition or purchase of easements.....	9-1
9.2	Cost estimates for developing the trail and for proposed facilities.....	9-5
9.3	Phased implementation plan .....	9-20
9.4	Trail Management, Staffing and Maintenance Budgeting .....	9-21



9.5	Potential sources for capital and operating revenues .....	9-23
10.0	References .....	10-1
<b>Appendices</b>		
	Meeting Minutes .....	A
	Key Person Interviews .....	B
	Public Surveys .....	C
<b>List of Tables &amp; Figures</b>		
Fig. 2-1	Regional Key Map .....	2-2
Fig. 2-2	USGS Map of Study Area .....	2-3
Fig. 3-1	2005 Aerial Photography of the Study Area .....	3-3
Fig. 3-2	Historic 1894 USGS Map of Study Area .....	3-4
Fig. 4-1	Existing Trail and Conditions Map .....	4-4
Fig. 6-1	Proposed Trail System .....	6-2
Fig. 6-2	Proposed Trail System – Aerial Photo.....	6-3
Fig. 6-3	Kingston Area Trail – Section I.....	6-4
Fig. 6-4	Kingston Area Trail – Section II.....	6-7
Fig. 6-5	Kingston Area Trail – Section III .....	6-9
Fig. 6-6	Kingston Area Trail – Section IV-A.....	6-14
Fig. 6-7	Kingston Area Trail – Section IV-B.....	6-14
Fig. 6-8	Kingston Area Trail – Section IV-C.....	6-14
Fig. 6-9	Kingston Area Trail – Section V .....	6-23
Fig. 6-10	Back Mt. Trail Extension – Luzerne to Kingston Trail .....	6-26
Fig. 6-11	Back Mt. Trail Extension –Kingston Trail to Rutter Ave.....	6-26
Fig. 6-12	Back Mt. Trail Extension – Rutter Ave to Levee Trail.....	6-26
Fig. 6-13	Larksville Connector Trail.....	6-42
Fig. 6-14	Market Street Connector Trail .....	6-47
Fig. 6-15	Hopkins Memorial Park Connector Trail .....	6-51
Fig. 6-16	Roosevelt Park Connector Trail.....	6-57
Fig. 6-17	Forty Fort Connector Trail.....	6-60
Fig. 6-18	Luzerne County Park Connector Trail.....	6-67
Fig. 6-19	West Side Vo-Tech Connector Trail.....	6-71
Fig. 7-1	Typical Trail Detail .....	7-2
Fig. 7-2	Minimum Recommended Rail with Trail Setbacks .....	7-4
Fig. 7-3	Vegetation for a Buffer Between Trail and Active Rail Line.....	7-4
Fig. 7-4	Minimum Recommended Setbacks Along a Fill Section. ....	7-4
Fig. 7-5	Bicycle Lane Marking on a 2-way Street. ....	7-5
Fig. 7-6	Signing and Markings for Trail / Roadway Crossing. ....	7-6
Table 5-1	Greater Kingston Area Trail / Greenway Steering Committee.....	5-2
Table 5-2	Public Survey Results – Trail Amenities .....	5-5
Table 5-3	Public Survey Results – Potential Connections.....	5-6
Table 5-4	Public Survey Results – Potential Trail Head Locations .....	5-6

Table 8-1	Typical Trail Maintenance Tasks.....	8-4
Table 8-2	Common Maintenance Tasks for Volunteers .....	8-6

**List of Tables & Figures** *(continued)*

Table 9-1	Trail Easements required for proposed trail system .....	9-2
Table 9-2	Cost estimates for developing the Kingston Area Trail.....	9-5
Table 9-3	Cost estimates for developing the Back Mountain Extension Trail .....	9-9
Table 9-4	Cost estimates for developing the Larksville Connector Trail .....	9-12
Table 9-5	Cost estimates for developing the Market Street Connector Trail .....	9-13
Table 9-6	Cost estimates for developing the Hopkins Mem Pk Connector Trail ....	9-14
Table 9-7	Cost estimates for developing the Schuyler Ave Connector Trail .....	9-15
Table 9-8	Cost estimates for developing the Roosevelt Park Connector Trail .....	9-15
Table 9-9	Cost estimates for developing the Forty Fort Connector Trail .....	9-16
Table 9-10	Cost estimates for developing the O'Hara Park Connector Trail .....	9-17
Table 9-11	Cost estimates for developing the Seminary Place Connector Trail .....	9-17
Table 9-12	Cost estimates for developing the Luzerne Co Park Connector Trail ....	9-18
Table 9-13	Cost estimates for developing the West Side Vo-Tech Trail .....	9-19
Table 9-14	Sample budget for staffing and maintenance .....	9-21



## Chapter 1: Executive Summary

### **INTRODUCTION**

Pennsylvania Environmental Council (PEC) received funding to prepare a Trail / Greenway Feasibility / Master Plan for the Greater Kingston Area in Luzerne County, Pennsylvania. The goal of this project has been to define in sufficient detail the wishes of the community and its priorities as they relate to the trail/greenway alignment and amenities, estimate trail/greenway construction and maintenance costs, and lay the foundation for the entity(s) which will ultimately be responsible for the development and maintenance of the trail.

### **STUDY AREA**

The study area is located in the Wyoming Valley in northeastern Luzerne County, Pennsylvania. The original study area of six municipalities encompassed the Boroughs of Edwardsville, Forty Fort, Kingston, Larksville, Luzerne, and Swoyersville. Based upon comments received at the initial public meeting for the project, the Boroughs of Pringle and Courtdale were added to the study. The entire study area covers 14.2 square miles along the western shore of the Susquehanna River.

The eight Boroughs included in this study are predominately residential communities with small, downtown business districts. The residences of this area are made up of diverse ethnic groups and many are descendants of immigrants that came to the region to work in the Coal Industry. State Route 11 (Wyoming Avenue) runs north to south thru the area, numerous retail businesses are located along this major roadway. Railroad grades, both active and abandoned crisscross the area. These numerous rail lines are a relic from the Coal Era.

Four major trail systems are currently planned or constructed within the Kingston region; The Susquehanna Warrior Trail, The Back Mountain Trail, The West Side Trail and the Luzerne County Levee Trail System. In addition, several trail systems are planned or constructed in Wilkes Barre on the eastern side of the Susquehanna River. One of the goals of this study is to provide linkage to these trail systems.

### **PUBLIC INPUT**

PEC organized and hosted a public meeting on May 19, 2008 to provide information about the project and solicit input from the community. Held at the Luzerne County Annex Building, the meeting was attended by representatives from impacted municipalities, local business leaders, neighborhood and community groups, and adjacent property owners. The Project Consultants attended this public meeting to provide technical assistance and answer questions. A brief demonstration of the project's GIS Database was given followed by an open discussion about the goal of the project.

A Trail Steering Committee was selected by the Northeastern Regional Office of the Pennsylvania Environmental Council (PEC). Members of the Steering Committee included representatives from impacted municipalities, local business leaders, neighborhood and



community groups, and adjacent property owners. A series of four Steering Committee meetings were organized by PEC and facilitated by Project Consultants. A portable GIS system was used by the consulting team to provide interactive GIS presentations during Committee meetings. This technology provided instantaneous access to invaluable information needed to make key decisions in the trail planning process.

The Committee provided local insight into regional issues that impacted the project. Key Destinations, Preferred Trail Routes and other key decisions were made by the Trail Steering Committee.

Various representatives from the Greater Kingston area as well as community organizations participated in the planning process through the steering committee meetings. Therefore, the steering committee determined it was not necessary to conduct extensive key person interviews. However, PEC conducted key person interviews with five (5) individual

Public surveys were distributed via a variety of means including distribution by steering committee members to their respective service populations. PEC also partnered with Action Communities for Health, Innovation & Environmental Change (ACHIEVE), Steps to a Healthier PA (STEPS) Luzerne County, Partners for a Healthy Luzerne County, Wilkes-Barre Family YMCA and the Wyoming Valley Wellness Trails Partnership to distribute surveys.

## **PROPOSED TRAIL SYSTEM**

Based upon discussions with the Steering Committee, Public Meetings, Opinion Surveys and Key Person Interviews the Greater Kingston Area Trail / Greenway network has been developed. Two major new trails are proposed for the area: The Kingston Area Trail and the Back Mountain Trail Extension. Access to and from key destinations from these main trails will be accomplished through a series of smaller connector trails. The trail network will capitalize on the vast network of railroad right of ways using both abandoned and active lines. Sidewalk improvements and on-street bicycle lanes have been proposed for many of the connector trails.

Details of each of the trails in the proposed network follow:

### **Kingston Area Trail**

The Kingston Area Trail will serve as the North / South spine of the proposed trail network. Beginning at the proposed terminus of the Susquehanna Warrior Trail at State Route 11 in Larksville Borough the trail will run 5.7 miles north through the study site to the intersection of the West Side Trail and the Luzerne County Levee Trail in Wyoming Borough. Most of this trail will follow railroad right of ways with the last section of trail following an existing flood levee.

### **Back Mountain Trail Extension**

The 2.14 mile Back Mountain Trail Extension will begin at Buckingham Street in Luzerne Borough and will connect into the Luzerne County Levee Trail behind the Kingston Recreation Center. This trail will intersect the Kingston Area Trail and will also provide linkage to the Luzerne County Vo-Tech School. The proposed trail route runs along an abandoned railroad grade which is currently owned by the Redevelopment Authority of

Luzerne County. The preliminary route evaluation found only minimal encroachments into this right of way.

**Larksville Connector Trail**

This 1.6 mile trail would connect Romanoskey Park in Larksville to the Susquehanna Warrior Trail, thus providing this neighborhood access to the regional trail system. The trail route is proposed along an abandoned railroad grade thru mine scarred land. Issues which will need to be addressed before this trail becomes a reality include property ownership, safe crossing of Route 11, an existing junk yard and the completion of the Susquehanna Warrior Trail.

**Market Street Connector Trail**

This connector trail would utilize the existing sidewalks and roadway to bring people from Five Corners section of Kingston and the Market Street Bridge to the Kingston Area Trail. This route will also provide students from the Wyoming Seminary access to the regional trail system.

**Hopkins Memorial Park Connector Trail**

This connector trail would begin at the parking area in John J. Hopkins Memorial Park in Edwardsville Borough. It will run across the park and down Beverly Drive and Lawrence Street to connect into the Kingston Area Trail. A crushed stone trail is proposed through the park with existing sidewalk and roadway used along Beverly Drive and Lawrence Street. At the end of Laurence Street, the trail will follow the easement for the Toby Creek tunnel. This section of trail will once again be crushed stone until its connection into the Kingston Area Trail.

**Schuyler Ave Playground Connector Trail**

This Connector Trail will be a short Crushed Stone trail connecting the Schuyler Ave. Playground in Kingston to the Kingston Area Trail.

**Roosevelt Park Connector Trail**

This connector trail would begin at the parking area at the corner of Church and Tripp Streets in Swoyersville Borough and would run down the Tripp Street right of way to the Kingston Area Trail. This trail would utilize existing and new sidewalk along Tripp Street and Crushed Stone trail from the end of the paved road to the Kingston Area Trail.

**O'Hara Park Connector Trail**

This Connector Trail will be a short Crushed Stone trail connecting O'Hara Field in Swoyersville to the Kingston Area Trail.

**Seminary Place Connector Trail**

This connector trail would utilize the existing sidewalks and roadway along Seminary Place in Forty Fort Borough. The proposed trail and bike lane would provide students from the Wyoming Seminary Lower School access to the regional trail system. The trail will also connect Wyoming Avenue (Route 11) with the Kingston Area Trail.

**Luzerne County Park Connector Trail**

This connector trail would utilize the existing sidewalks and roadway from the Kingston Area Trail, down Dennison Street to an existing signalized intersection at Wyoming Avenue



(Route 11). The trail will cross over the Abrahams Creek Bridge and turn to enter into the Luzerne County Sports Complex. The trail will then wind through the County land to merge into the Luzerne County Levee Trail.

#### **West Side Vo-Tech Connector Trail**

This connector trail will provide a connection from the West Side Vo-Tech School to the proposed Back Mountain Trail Extension. The trail will begin at the Vo-Tech School and travel northeast along Evans Street (*State Route K038*). The trail will pass under Route 309 via an existing underpass and over Toby Creek on the Evan Street Bridge. This connector trail will link into the Back Mountain Trail Extension on the eastern side of Union Street, prior to the crossing of the Route 309 on-ramp.

### **TRAIL OPERATION, MAINTENANCE AND SECURITY**

The Steering Committee was presented with the following potential organizational structure options to oversee the management of the trail system. These options included:

1. Formation of a Non-Profit Organization
2. Creation of an Authority
3. Creation of a Commission
4. Creation of a Council of Governments
5. Ownership by the ASTA, SWTC and/or WST

An ongoing maintenance and improvement program will ensure that the entire trail system is kept in optimal condition, and meets or exceeds existing standards. Landscaped areas along the trail will require some periodic maintenance, but good design can keep this to a minimum. Low maintenance and drought resistant trees, shrubs, and ground covers can also minimize upkeep activities. Like all transportation improvements, trail systems require funding and staff time for maintenance. Fortunately, several strategies and funding programs are available to reduce the burden to local agencies. Hundreds of trails around the state provide examples of successful management and maintenance strategies.

Although studies show that rail-trail crime is rare, it is nonetheless a legitimate concern for residents and trail users and should be treated accordingly. There are several methods for addressing such concerns and minimizing the potential for crime. Encouraging trail use is one way to help ensure trail safety, as the presence of other users helps to minimized undesirable behavior. In addition, trail users should exercise common sense when using trails after dark and remain aware of their surroundings at all times. Several other mitigation strategies help suppress criminal behavior and lessen the impact of incidents that do occur. In particular, trail design features and trail patrols are useful to keep in mind and recommendations for their implementation are included in this report. However since every rail-trail environment is unique, trail managers should assess the need for these strategies on an individual basis.



## **TRAIL IMPLEMENTATION**

Based upon existing trail connections, land acquisition feasibility, and construction costs, implementation of the Kingston Area Trail Master Plan is recommended as follows:

### **PHASE I: Back Mountain Trail Extension**

This proposed trail will connect the existing Back Mountain Trail to the Luzerne County Levee Trail System at the Kingston Recreation Center.

### **PHASE II: Kingston Area Trail**

The Kingston Area Trail is the “spine” of the proposed trail system and will be the most beneficial to the local community.

### **PHASE III: Larksville Connector Trail**

Although the Larksville Connector Trail will provide area residents with a valuable connection to the regional trail system, this trail is dependent upon many outside factors.

### **PHASE IV: Backroad Bike Route**

Once the Larksville Connector Trail is completed, this bike route will provide a northern connection to the proposed trail system and the West Side Trail.



## Chapter 2: Introduction

### 2.1 Study Purpose

Pennsylvania Environmental Council (PEC) received funding to prepare a Trail / Greenway Feasibility / Master Plan for the proposed Greater Kingston Area Trail / Greenway in Luzerne County, Pennsylvania. The goal of this project has been to define in sufficient detail the wishes of the community and its priorities as they relate to the trail/greenway alignment and amenities, estimate trail/greenway construction and maintenance costs, and lay the foundation for the entity(s) which will ultimately be responsible for the development and maintenance of the trail.

The study area is located in the Wyoming Valley in northeastern Luzerne County, Pennsylvania (*See Figure 2.1*). The original study area of six municipalities encompassed the Boroughs of Edwardsville, Forty Fort, Kingston, Larksville, Luzerne, and Swoyersville. Based upon comments received at the initial public meeting for the project, the Boroughs of Pringle and Courtdale were added to the study (*See Figure 2.2*). The entire study area covers 14.2 square miles along the western shore of the Susquehanna River.

Four major trail systems are currently planned or constructed within Kingston region; The Susquehanna Warrior Trail, The Back Mountain Trail, The West Side Trail and the Luzerne County Levee Trail System. In addition, several trail systems are planned or constructed in Wilkes Barre on the eastern side of the Susquehanna River. One of the goals of this study is to provide linkage to these trail systems.

### 2.2 Demand for and Potential Use of Trail

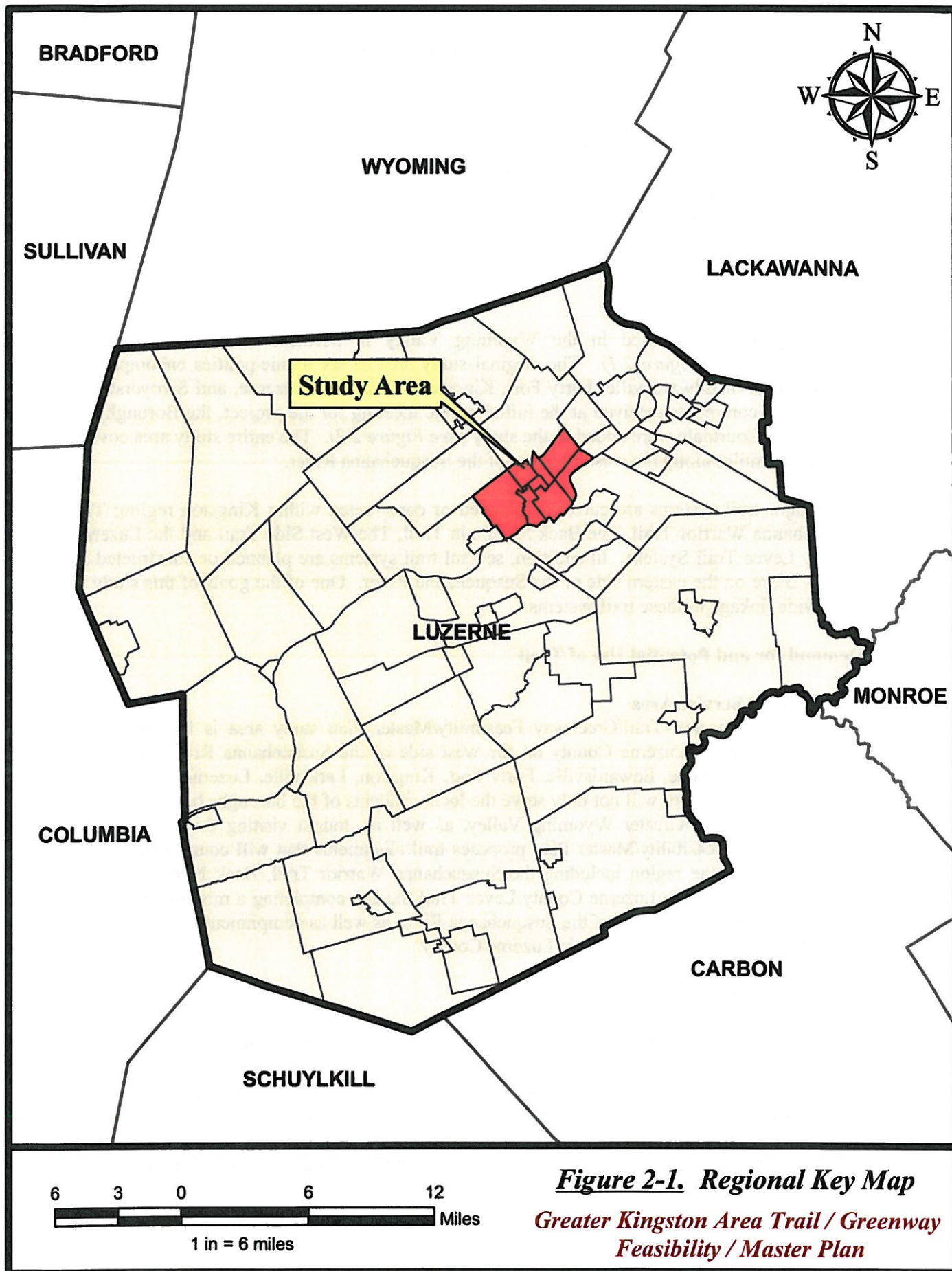
#### 2.2.1 Project Service Area

The Greater Kingston Trail/Greenway Feasibility/Master Plan study area is located in the Northeast corner of Luzerne County on the west side of the Susquehanna River within the Boroughs of Courtdale, Edwardsville, Forty Fort, Kingston, Larksville, Luzerne, Pringle and Swoyersville. This trail will not only serve the local residents of the boroughs but additionally the residents of the Greater Wyoming Valley, as well as, tourist visiting the region. The Trail/Greenway Feasibility/Master Plan proposes trail alignments that will connect to various existing trails in the region including the Susquehanna Warrior Trail, Back Mountain Trail, West Side Trail and the Luzerne County Levee Trail thereby completing a missing link in the trail network on the west side of the Susquehanna River as well as complimenting the growing network of over 100 miles of trails in Luzerne County.

#### 2.2.2 Community Character Courtdale Borough

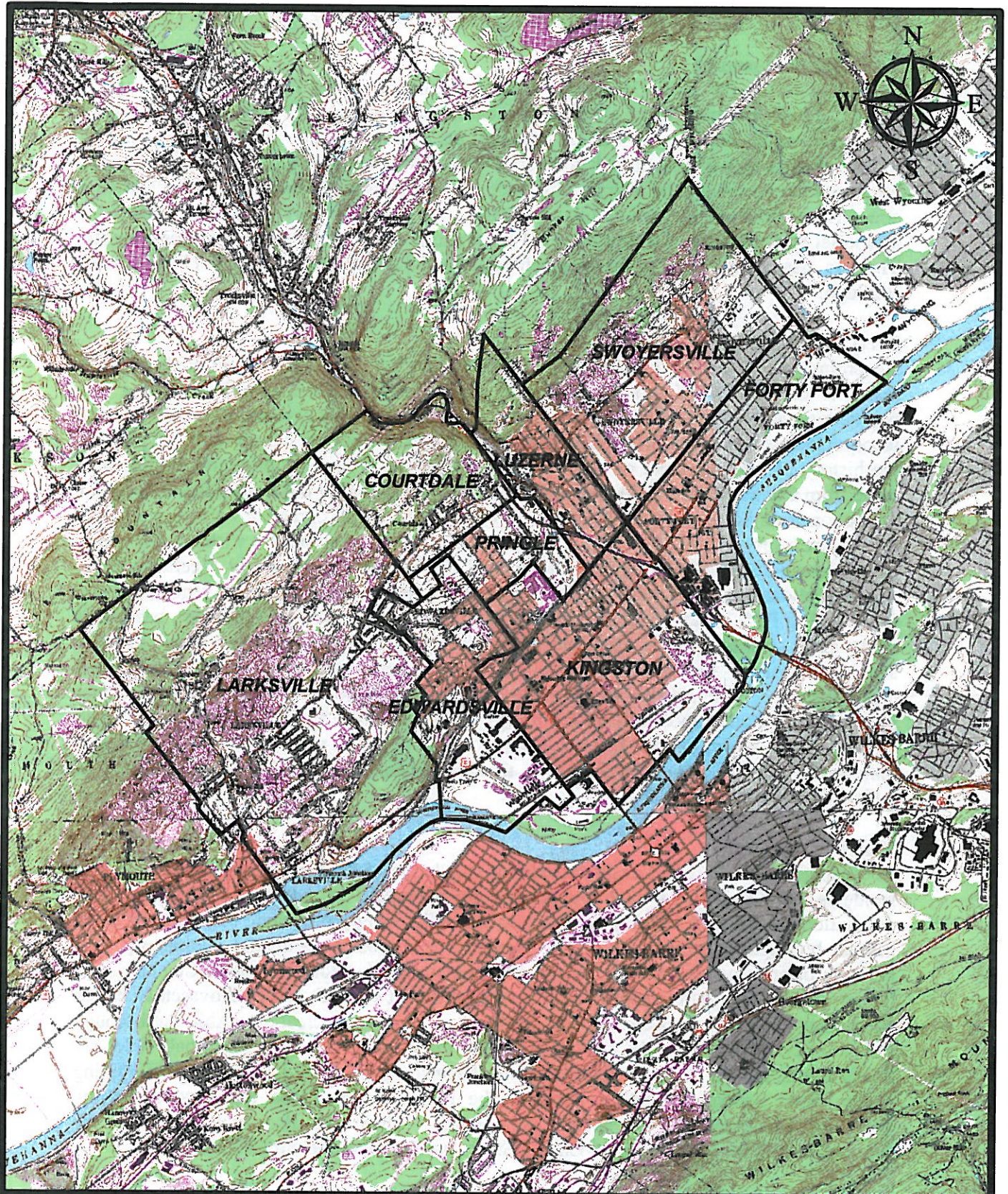
According to the US 2000 Census the current population of Courtdale Borough is 791 residents and consists of a total land area of approximately 1.3 square miles resulting in a population density of 608.5 persons per square mile. Courtdale Borough became incorporated as an official borough on September 6, 1897. Courtdale Borough is primarily a residential area with a few businesses scattered throughout the borough. The Courtdale Municipal Building along with the Courtdale Fire Department is located on Blackman Street. The Luzerne Courtdale Pringle (LCP) Little League Park is located on Hoyt Street.





***Figure 2-1. Regional Key Map***  
***Greater Kingston Area Trail / Greenway***  
***Feasibility / Master Plan***





5,000 2,500 0 5,000 10,000  
 Feet  
 1 in = 5,000 feet

***Figure 2-2. USGS Map of Study Area***  
***Greater Kingston Area Trail / Greenway***  
***Feasibility / Master Plan***



### **Edwardsville Borough**

According to the US 2000 Census the current population of the Edwardsville borough is 4,984 residents and consists of a total land area of approximately 1.2 square miles resulting in a population density of 4,153.3 persons per square mile. Edwardsville became incorporated as an official borough June 16, 1884. Edwardsville is mainly a residential area but does have a commercial district with three (3) major shopping centers. The recreational amenities in the borough include three (3) parks. One of these parks, the John J. Hopkins Memorial Park consists of nearly eight (8) acres and is used for many local sporting events. There is also a trail head to the Susquehanna River Levee Trail on Route 11 within the Borough.

### **Forty Fort Borough**

According to the US 2000 Census the current population of Forty Fort Borough is 4,579 residents and consists of a total land area of approximately 1.3 square miles resulting in a population density of 3,522.3 persons per square mile. Forty Fort Borough became incorporated as an official borough January 31, 1887. The Borough has a prominent place in the history of the settlement of the Wyoming Valley. It is named after forty settlers who came from Connecticut in 1770 and built a fort along the banks of the Susquehanna River for protection from hostile forces. A large rock on River St. at the corner of Fort St. marks the approximate spot where the fort stood. Other points of historical interest within the borough include the Nathan Denison House, the Forty Fort Cemetery and the Old Meeting House. The recreational amenities in the borough include two parks, the Wyoming Avenue Park and the Borough Park. The Wyoming Avenue Park contains playground equipment, basketball courts and a swimming pool. The Borough Park includes open play areas, a toddler area with swings and small sliding board, a "fort" play structure, basketball court, gazebo, and swimming pool. In addition to the parks, other sport facilities within the Borough that provide recreational opportunities for borough residents include the Forty Fort Little League field on Tripp Street and the Luzerne County Sports complex with soccer fields and open play areas. There is also a trail head to the Susquehanna River Levee Trail on River St within the Borough.

### **Kingston Borough**

According to the US 2000 Census the current population of the Kingston Borough is 13,855 residents and consists of a total land area of approximately 2.1 square miles resulting in a population density of 6,597.6 persons per square mile. Kingston became incorporated as an official borough November 23, 1857. Kingston is a mostly residential community. The borough offers a wide variety of indoor activities at the Kingston Recreation Center, which include: basketball and racquetball courts, state of the art strength and cardiovascular fitness equipment, computer amusements, and pool tables. Outdoor recreation within the borough includes seven outdoor parks and playgrounds, three tot lots, a lighted softball field, six tennis courts, and an Olympic-plus size pool. Kingston is centrally located in the Wyoming Valley West School District, is home to the Hoyt Library, Good Shepherd Academy, Wyoming Seminary and 14 houses of worship. There are also trail heads for the Susquehanna River Levee Trail on Church Street and First Avenue within the Borough.

### **Larksville Borough**

According to the US 2000 Census the current population of the Larksville Borough is 4,694 residents and consists of a total land area of approximately 4.8 square miles resulting in a population density of 977.9 persons per square mile. Larksville was incorporated as an



official borough on November 10, 1909. The major industry within the borough was mainly coal mining. Larksville Borough is located close to the center of Luzerne County adjacent to the northwestern bank of the Susquehanna River. Larksville is the largest borough of the West Side Regional Area, which includes Courtdale, Edwardsville, Forty Fort, Luzerne, Plymouth, Pringle and Swoyersville. It is also one of the largest boroughs in the state.

#### **Luzerne Borough**

According to the US 2000 Census the current population of the Luzerne Borough is 2,952 residents and consists of a total land area of approximately 0.7 square miles resulting in a population density of 4,217.1 persons per square mile. Luzerne was incorporated as an official borough in 1882. The borough recently enjoyed a successful downtown revitalization program. Along Main Street in downtown Luzerne Borough there are many unique businesses as well as a post office, bank, pharmacy, salons, a dance center and a variety of restaurants. The Luzerne Creek Walk, a portion of the Back Mountain Trail, runs between Main Street and Toby's Creek and the trail head to access the Back Mountain Trail is located on Parry Street in the borough.

#### **Pringle Borough**

According to the US 2000 Census the current population of the Pringle Borough is 991 residents and consists of a total land area of approximately 0.5 square miles resulting in a population density of 1,982.0 persons per square mile. Pringle Borough was incorporated as an official borough on January 17, 1914. The borough was named Pringle in honor of Thomas Pringle, upon whose farm the village of Pringle Hill was built. The West Side Area Vocational Technical School is located on Evans Street, as well as the Town Hall and the Pioneer Volunteer Fire Company.

#### **Swoyersville Borough**

According to the US 2000 Census the current population of the Swoyersville Borough is 5,157 residents and consists of a total land area of approximately 2.5 square miles resulting in a population density of 2,062.8 persons per square mile. Swoyersville was incorporated as an official borough in 1899. Swoyersville Borough was originally part of Kingston Township, one of the eleven original townships chartered by the Susquehanna Company in 1790. Although the area was pre-dominantly an agricultural community, that all changed with the discovery of anthracite coal in 1825. At first the town was comprised of two villages, Maltby and Brodericks, but due to the development of the mining industry many other small "patches", mainly company homes owned by the coal companies, sprang up and added to the towns' population. Currently, Swoyersville Borough is a bedroom community with a few businesses scattered throughout the borough. The Borough has long been shadowed by the coal mine influence but slowly the town is changing that through mine reclamation projects which are turning mine scarred land into land suitable for housing.

#### **2.2.3 Population Information and Demographic Patterns.**

According to the 2000 U.S. Census, the total population of the study area is 38,003 residents. From 1990 to 2000 the population for the study area decreased by 6%. All of the boroughs within the study area had population decreases with the exception of Courtdale Borough which had a very slight population increase of 7 residents, an approximately 1% increase.



**Table 2.1:** Population and Population Change within the Project Study Area.

	Population			
Borough	1990	2000	Change	% Change
Courtdale	784	791	7	0.89%
Edwardsville	5,399	4,984	-415	-7.69%
Forty Fort	5,049	4,579	-470	-9.31%
Kingston	14,507	13,855	-652	-4.49%
Larksville	4,700	4,694	-6	-0.13%
Luzerne	3,206	2,952	-254	-7.92%
Pringle	1,161	991	-170	-14.64%
Swoyersville	5,630	5,157	-473	-8.40%
<b>TOTAL</b>	<b>40,436</b>	<b>38,003</b>	<b>-2,433</b>	<b>-6.02%</b>

According to the 2000 US Census data the majority of the study area residents, approximately 32% are between the ages of 20-44. This trend is also reflected within each of the boroughs. The median age of the study area residents is 42 years and the median age for borough residents ranges from 38 to 44 years. The median household income for the study area is \$32,172, with Edwardsville Borough having the lowest median household income of \$20,000 and Forty Fort Borough having the highest median household income of \$40,306. There are 2,706 total households in the study area and the average household size is 2.29 persons per household.

**Table 2.2:** Age of Residents within the Project Study Area.

	Municipality								Study Area
DATA	Courtdale	Edwardsville	Forty Fort	Kingston	Larksville	Luzerne	Pringle	Swoyersville	Total
% Age 19 and Under	22.25%	25.38%	23.21%	21.98%	25.82%	19.99%	21.80%	20.79%	22.74%
% Age 20-44	30.59%	32.83%	32.12%	30.75%	32.02%	33.60%	30.47%	31.10%	31.61%
% Age 45-64	28.07%	20.59%	25.07%	22.82%	26.67%	22.49%	26.84%	24.68%	23.72%
% 65 and Over	19.09%	21.21%	19.59%	24.44%	15.49%	23.92%	20.89%	23.42%	21.94%
Median Age	43	38	42	43	41	43	44	44	42
Median HH Income	\$38,150	\$20,000	\$40,306	\$33,611	\$35,467	\$27,614	\$31,793	\$30,434	\$32,172
Total Households	315	2,345	1,989	6,065	1,808	1,410	432	2,243	2,076
Average HH Size	2.51	2.09	2.29	2.16	2.59	2.09	2.29	2.3	2.29

A review of the working age population for the study area indicates that the majority, approximately 81% of the study area residents drive alone to work daily. This trend is also reflected within each of the respective boroughs with a range of 70% to 84% of borough residents driving alone to work. Edwardsville Borough residents do have the highest percentage of residents that carpool to work, approximately 19% as compared to the study area population which has an average of 12% of residents that carpool to work. Although the majority of residents drive to work the average travel time to work for study area residents was only 18.4 minutes with the average drive time to work for the individual boroughs ranging from 11 to 23 minutes. A very low percentage of study area residents use other means (i.e. public transportation, bike) to get to work.



**Table 2.3:** *Mode of Transportation to Work for Residents within Study Area.*

	Municipality								Study Area
Commuting to Work Data	Courtdale	Edwardsville	Forty Fort	Kingston	Larksville	Luzerne	Pringle	Swoyersville	Total
% Car, truck, van-drove alone	84.06%	69.57%	85.32%	81.28%	83.82%	78.48%	79.74%	81.63%	80.62%
% Car, truck, van-carpooled	9.77%	18.93%	11.83%	9.31%	13.40%	13.13%	15.47%	12.55%	12.19%
% Public transportation	0.77%	2.18%	0.51%	1.60%	0.29%	2.63%	0.44%	0.71%	1.27%
% Walked	0.00%	6.54%	1.79%	4.58%	1.10%	4.16%	1.96%	3.93%	3.72%
% Other means	0.51%	0.45%	0.00%	0.73%	0.53%	1.24%	0.87%	0.50%	0.58%
% Worked at home	4.88%	2.33%	0.55%	2.49%	0.86%	0.36%	1.53%	0.67%	1.62%
Total workers 16 yrs and over	389	2,018	2,350	6,262	2,089	1,371	459	2,390	17,328
Mean travel time to work (min)	11	18.6	18.3	18.1	21.9	19.9	16.5	22.7	18.4

#### 2.2.4 Profile of Potential Trail Users

The Greater Kingston Trail/Greenway is located on the west side of the Susquehanna River in the boroughs of Courtdale, Edwardsville, Forty Fort, Kingston, Larksville, Luzerne, Pringle and Swoyersville. This trail will not only serve the local borough residents but also residents of the Greater Wyoming Valley. Based on the survey conducted for this Master Plan and a review of the 2000 US Census data the trail will likely be used by residents between the ages of 20-44. Due to the urban setting for the majority of the trail it will likely be primarily used by local residents as opposed to tourists. However as the growing system of trails in the greater Wyoming Valley and the surrounding counties becomes connected it is possible that the trail will see some usage by tourists visiting the area. Based on the data regarding the percentage of residents that drive alone to work and the average travel time to work coupled with the urban nature of the trail, it is possible that the trail could be a viable commuting option for local residents.

There are numerous existing trails in Luzerne County on the west side of the Susquehanna River including the Susquehanna River Levee Trail, the West Side Trail, the Susquehanna Warrior Trail the Back Mountain Trail and the Back Mountain Trail Extension. As the Plan for the Greater Kingston Trail/Greenway proposes connections to these trails, it is likely that those trail users will also use the Greater Kingston trail. The Pennsylvania Environmental Council is also currently conducting a trail/greenway master plan for the City of Wilkes-Barre which will connect existing trails on the east side of the Susquehanna River including the Luzerne County National Recreation Trail, Susquehanna River Levee Trail and the Black Diamond Trail (part of the D&L National Heritage Trail) to the Greater Kingston trail via the Carey Avenue Bridge, the Market Street Bridge and the Pierce Street Bridge thereby providing connections to the trails on the west side of the Susquehanna River also attracting those trail users to the Greater Kingston Trail.

Based on the public survey responses current users of existing trails use these trails on a weekly basis at a minimum. Also, based on the survey data results, there does not appear to be a peak time for trail usage. Trail usage is consistent throughout the week, as well as, throughout the day.

The Pennsylvania Environmental Council in partnership with the Wyoming Valley Wellness Partnership is conducting bicycle and pedestrian counts on the Back Mountain Trail however the trail counter does not distinguish between bicyclists and pedestrians but does reflect general

usage of the trail. According to counts taken from June 2009 through October 2009 there were approximately 14,500 total trail users with an average of 690 trail users per week. An analysis of the hourly trail data shows that the trail is being used more heavily during the weekday early morning (6:00 am to 8:00 am), lunch (12:00 noon to 1:00 pm) and early evening (5:00 pm to 6:00 pm) time periods. The weekday counts indicate that the Back Mountain Trail may currently be being used not only for recreational purposes based on the afternoon peak, but also as a commuting option based on the morning and evening peak counts. During the weekends the data shows a more consistent usage over the course of the day indicating that on the weekend the trail is most likely being used for recreational purposes.

If these trends continue and can be extrapolated to the Greater Kingston trail then this trail will likely see weekday by bicyclists and pedestrians for not only recreational purposes but as a commuting option for trips to work, shop and school and consistent usage throughout the weekends for recreational opportunities.



## **Chapter 3: Background Information**

### **3.1 Description of Study Area**

The eight Boroughs included in this study are predominately residential communities with small, downtown business districts. Figure 3-1 is a 2005 aerial photograph of the Study Area. The residences of this area are made up of diverse ethnic groups and many are descendants of immigrants that came to the region to work in the Coal Industry. State Route 11 (Wyoming Avenue) runs north to south thru the area, numerous retail businesses are located along this major roadway. Railroad grades, both active and abandoned crisscross the area. These numerous rail lines are a relic from the Coal Era.

The northwestern third of the study area is located in the foothills of Back Mountain. Much of this area is currently undeveloped and in some cases the land has been scared from previous coal mining operations. The Susquehanna River runs along the southeastern side of the study area. Flood control dikes line the river through much of the study area. On the opposite side of the river is the City of Wilkes Barre.

### **3.2 Regional History**

The region surrounding the Susquehanna River in NE Pennsylvania is referred to as the Wyoming Valley. The Native Americans in this area referred to the Great Plains on both sides of the river as “Maugh-wau-wa-me,” which the early English settlers, somehow, translated into Wyoming. The region has a very long and colorful history dating back to the 17<sup>th</sup> Century.

Much of the Wyoming Valley’s history is centered on the mining of anthracite coal. Anthracite coal, cleaner and hotter burning than any coal available from any other source, fueled the American Industrial Revolution. Hundreds of thousands of immigrants came to establish new lives in the Wyoming Valley. These immigrants and their descendents have given the valley an incredibly rich and diverse culture. The churches, neighborhoods, schools, gathering places, restaurants, and taverns located throughout this county are a lasting testament to the rich mixture of immigration that came into the Wyoming Valley. Several historic landmarks are located within the study area including Forty Fort Meeting House, Swetland Homestead and the Nathan Denison House.

From 1834 until the end of the Civil War, the valley’s anthracite headed south to Baltimore and Philadelphia on an ever-increasing series of local and regional canals. In 1858, the North Branch Extension Canal was completed from Pittston to New York State allowing the valley’s coal to move into New York State and New England. By 1875 anthracite coal from the Wyoming Valley/Luzerne County represented half the anthracite produced in the Commonwealth. That dominant place in the market was never challenged through the end of the coal era.

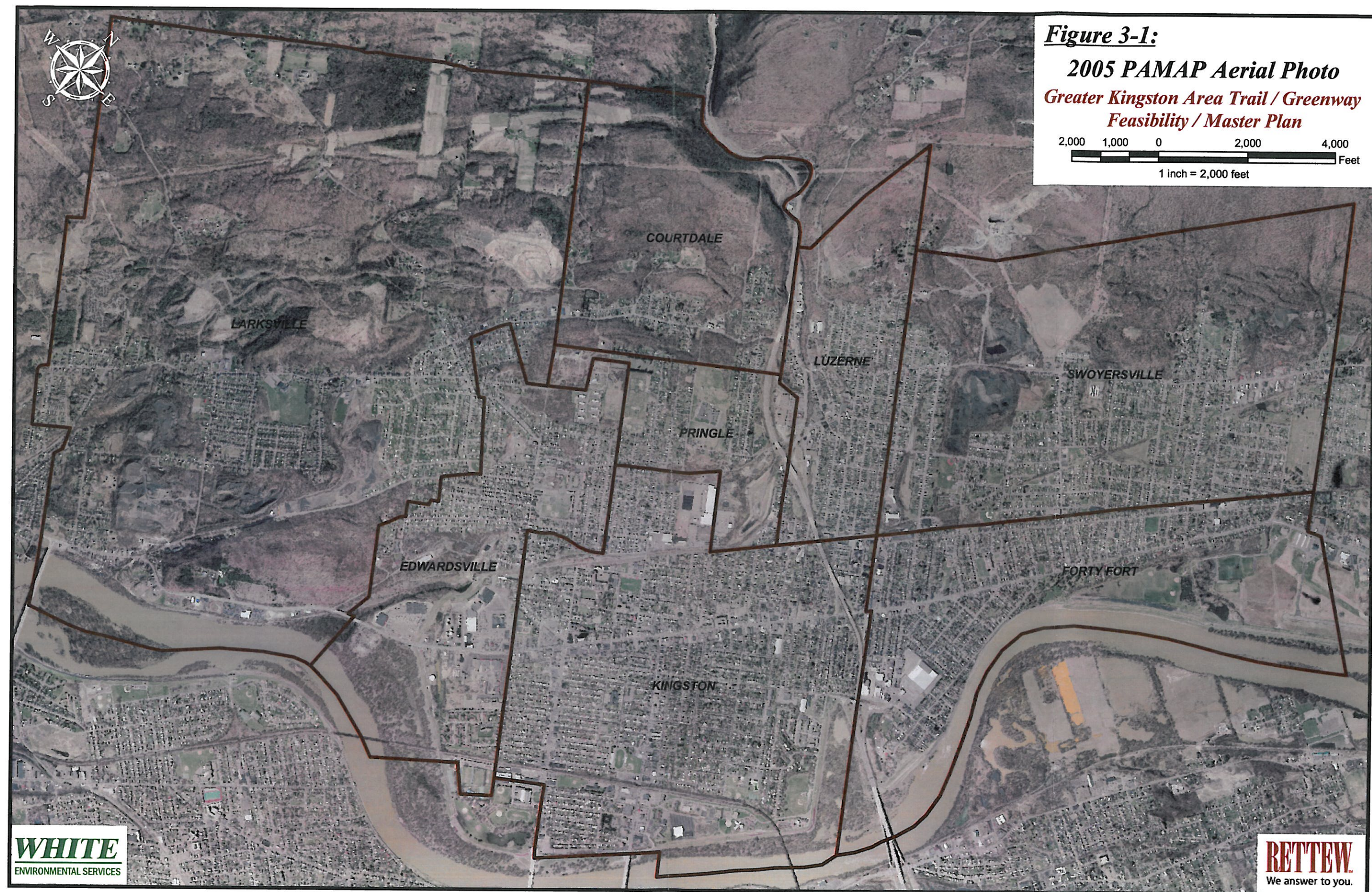
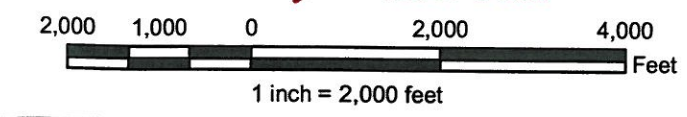
The Lehigh and Susquehanna River Railroad was completed in 1846 and quickly forced the canal industry into extinction. The railroad moved Wyoming Valley anthracite from its various coal fields to White Haven. Upon leaving White Haven, an extensive rail network delivered the Wyoming Valley’s “black diamonds” to a market throughout the



eastern United States. Additional rail lines were constructed to move materials including lumber, ice and other goods throughout the region. Many of these rail lines have been abandoned, but are now being rediscovered through the Rail to Trail program which is developing across Northeastern Pennsylvania. The 1892 and 1893 USGS Map of this region shown in Figure 3.2 shows the extensive rail system which was built in the Kingston area. Many of the trails proposed by this study are located on these abandoned right of ways.



**Figure 3-1:**  
**2005 PAMAP Aerial Photo**  
**Greater Kingston Area Trail / Greenway**  
**Feasibility / Master Plan**





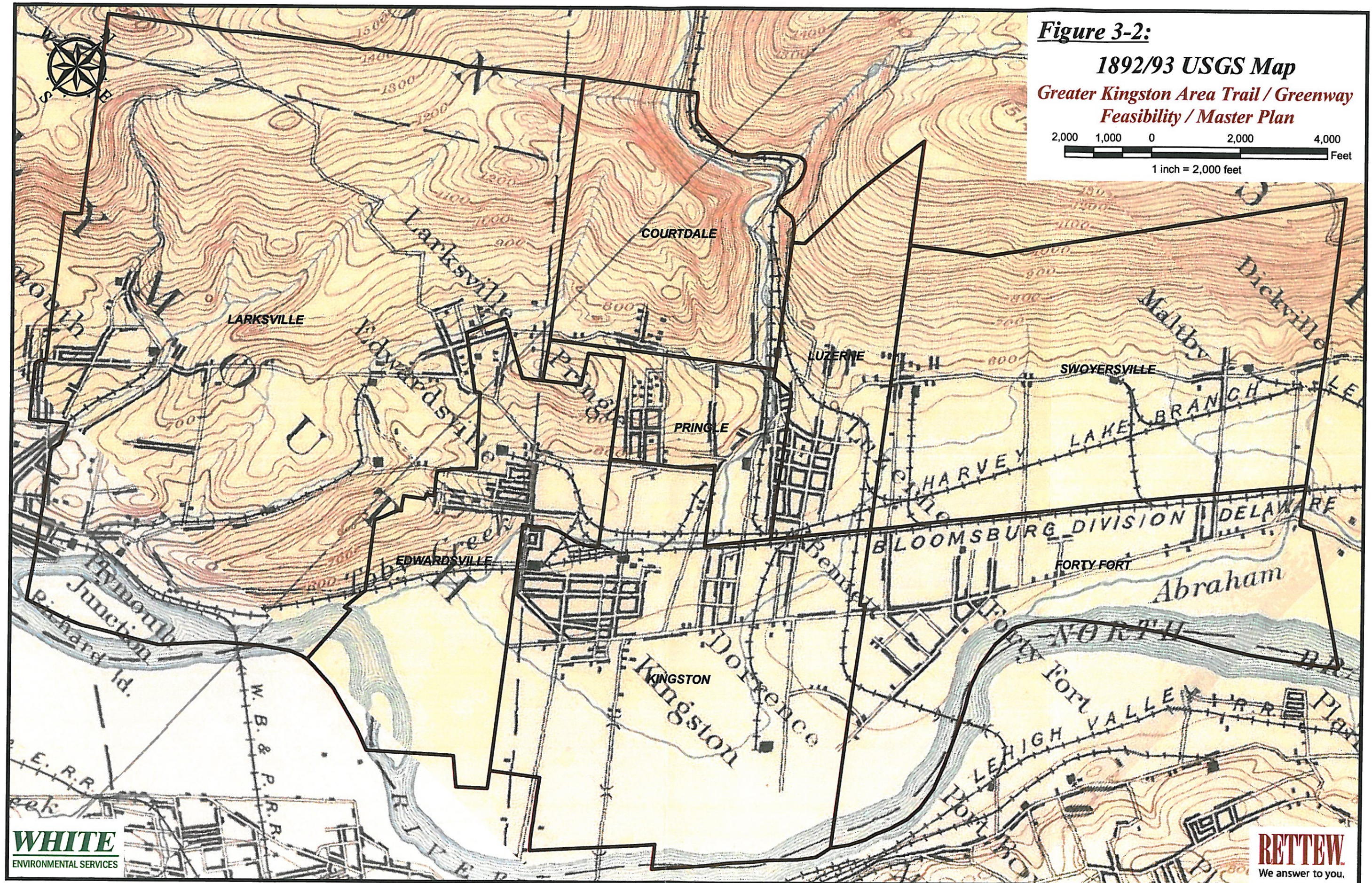
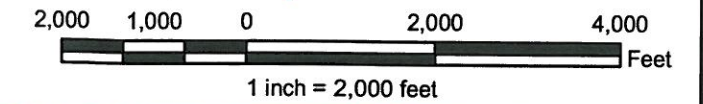




**Figure 3-2:**

**1892/93 USGS Map**

**Greater Kingston Area Trail / Greenway  
Feasibility / Master Plan**









## Chapter 4: Existing Conditions

### 4.1 Current Trail System

#### Luzerne County Levee Trail System

This eight foot wide paved trail runs along the top of the Susquehanna River Levee. There are approximately 12 miles of trail in total, in four different “reaches” on both the east and west sides of the river. This trail is open to walkers, joggers, bikers, dog-walkers, and roller-bladers. In winter, it is used by cross-country skiers and sled-riders. Benches and kiosks along the trail offer a place to rest and learn about the Wyoming Valley. This trail also includes connections to key bridges: the Market Street, and Pierce Street bridges in Wilkes-Barre and the Carey Avenue Bridge in Hanover Township and Plymouth Borough, allowing bicyclists and pedestrians to cross the river.

The Susquehanna River Levee trail system includes engineering and heritage kiosks designed by the Delaware and Lehigh National Heritage Corridor. The four reaches of the Levee Trail are: the First Resident’s Path/Forty Fort Reach, the Anthracite Heritage Walk/Kingston Reach, the Riverside Ramble/Wilkes-Barre and Hanover Reach, and the Plymouth Passage/Plymouth Reach. Two sections of the Levee Trail are located within the study area:

#### First Resident’s Path/Forty Fort Reach.

This is a 2.7 mile stretch of trail on the West side of the Susquehanna, going through the towns of Forty Fort and Wyoming, and connecting to the West Side Trail system. At the south end of the trail is an on-street connection to the nearby Kingston Reach of the Levee system, via River Street and Rutter Avenue.

#### Anthracite Heritage Walk/Kingston Reach.

This 3.5 mile stretch of trail goes through the towns of Kingston and Edwardsville. At the North end of the trail is an on-street connection to the nearby Forty Fort Reach of the Levee system, via Rutter Avenue and River Street.

#### West Side Trail

The West Side Trail is a 19 mile trail system through the boroughs of Exeter, Wyoming, West Wyoming and West Pittston. This diverse trail includes urban sections of sidewalks and other sections which are off-road in natural settings. Along this section residents can shop or enjoy the eateries and this section provides a safe route to school. The more natural section runs along the river front, Hicks Creek and the railroad tracks. The West Side Trail connects to the Luzerne County Levee Trail and will connect to the Luzerne County National Recreation Trail.

#### Back Mountain Trail

When complete, the Back Mountain Trail will feature 13 miles of winding scenic routes running parallel to Toby’s Creek from Harvey’s Lake to the Borough of Luzerne. The trail will mainly follow the route of a Lehigh Valley Rail line that was originally developed by an ice merchant in the 1880’s. This trail is in the scenic and rapidly developing Back Mountain community.

### Susquehanna Warrior Trail

As currently proposed, the Susquehanna Warrior Trail is an 18.5 mile route located parallel to State Route 11 and the Susquehanna River. The trail runs from the Pennsylvania Power and Light (PPL) Riverlands Park in Salem Township north to Larksville Borough. This nearly flat trail will have a packed gravel surface for cyclists, walkers and nature lovers and six (6) trail heads. Phase 1, approximately 10 miles in length, between the PPL Riverlands Park to three miles north of Shickshinny is currently open.

## **4.2 Land Use**

The eight Boroughs included in this study are predominately residential communities with small, downtown business districts. Figure 3.1 is a 2005 aerial photograph of the Study Area. The residences of this area are made up of diverse ethnic groups and many are descendants of immigrants that came to the region to work in the Coal Industry. State Route 11 (Wyoming Avenue) runs north to south thru the area, numerous retail businesses are located along this major roadway. Railroad grades, both active and abandoned crisscross the area. These numerous rail lines are a relic from the Coal Era.

The northwestern third of the study area is located in the foothills of Back Mountain. Much of this area is currently undeveloped and in some cases the land has been scarred from previous coal mining operations. The Susquehanna River runs along the southeastern side of the study area. Flood control dikes line the river through much of the study area. On the opposite side of the river is the City of Wilkes Barre.

## **4.3 Topography**

The Study Area is located in the Wyoming Valley between the Susquehanna River and Back Mountain. Much of the southeastern portion of the Study Area has been protected from flooding by a series of flood control dikes constructed by the US Corps of Engineers. The northwestern one third of the Study Area falls within the foothills of Back Mountain. Most of the trails proposed by this study are located on railroad right of ways and are therefore relatively level.

## **4.4 Natural Features**

During the past 150 years, coal mining and industry has reshaped the Wyoming Valley. Over the years, this area has been extensively developed. In viewing the aerial photo of the study site (Figure 3.1), the most notable natural features are Back Mountain and the Susquehanna River. Although Back Mountain remains scarred from coal mining operations, much of the mountain has reforested and this rugged area provides quality wildlife habitat. Likewise, the Susquehanna River has been significantly altered in the past. In an attempt to overcome flooding issues, the US Corp of Engineering has built an extensive system of flood levees, basins, and tunnels, thus changing the waterways throughout the region. However, scattered pockets of natural areas remain along the river's shoreline.

Although few truly "natural areas" remain in this region, some small "green areas" have reemerged from the urban landscape. In addition, small parks and playgrounds are scattered throughout the region.



#### **4.5 Wildlife Habitat**

As previously discussed, the region has been significantly disturbed in the past and is currently densely developed. Therefore, high quality wildlife habitat is limited to Back Mountain and the floodplain of the Susquehanna River. Since all of the proposed trails are located on railroad right of ways or in urban areas, the proposed trail system will have no significant impact upon wildlife habitat.

#### **4.6 Key Destinations**

Based upon discussions with the Steering Committee, Public Meetings, Opinion Surveys and Key Person Interviews key destinations were identified throughout the Study Area. An emphasis was placed upon existing parks, schools, churches, community centers, business districts and trail systems. Figure 4.1 shows the location of Public and Tax Exempt Properties within the Study Area.

#### **4.7 Property Ownership**

As shown in Figure 4.1, the majority of the property within the Study Area is privately owned. Along with the various municipal parks and schools, a significant amount of land along the Susquehanna River is publicly owned. In addition, the Redevelopment Authority of Luzerne County has acquired many of the railroad right of ways and several individual properties. Much of the proposed trail system will be located on properties owned by the Redevelopment Authority.

#### **4.8 Environmental Contamination**

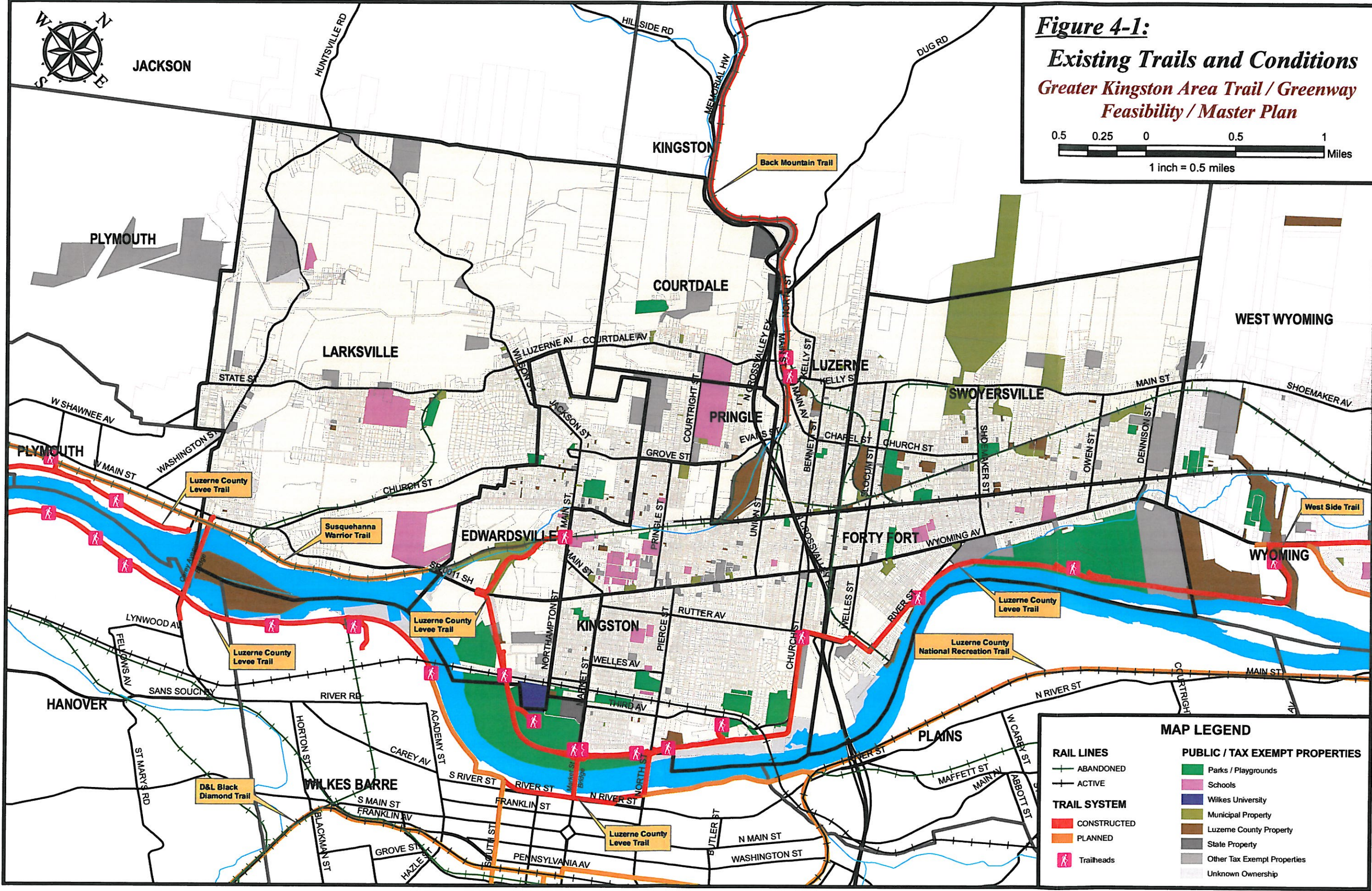
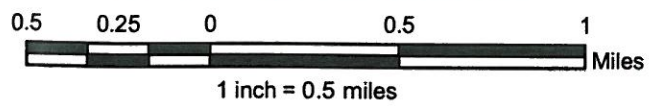
Residual contamination from railroad operations is the most common contamination found along rail corridors. Commonly reported contaminants along rail corridors include arsenic, which was used as a herbicide to control weeds, metals and petroleum products which dripped from engines and rail cars. Other contaminants may include creosote from the wood ties and coal ash from engines.

Industrial activities within railyards and adjoining the rail may have also contributed contaminants. Due to the heavy industrial development of this region during the 19<sup>th</sup> and 20<sup>th</sup> Centuries, numerous potential sources of environmental contamination are possible. Additional environmental investigations are recommended prior to any significant grading for the proposed trail system.





**Figure 4-1:**  
*Existing Trails and Conditions*  
*Greater Kingston Area Trail / Greenway*  
*Feasibility / Master Plan*









## Chapter 5: Trail Planning Process

### 5.1 Trail Planning Consultants

The development of the Greater Kingston Area Trail / Greenway Feasibility / Master Plan has been coordinated by the Northeastern Regional Office of the Pennsylvania Environmental Council (PEC). In March of 2008 PEC released a Request for Proposals (RFP) for consulting services on the project. The consulting firm of RETTEW Associates was selected from the applicants and a contract was executed in September of 2008. Jim Caldwell from RETTEW was designated as the Project Manager for this Trails / Greenways project. Subsequently, George White of White Environmental Services was retained as a sub-consultant for the project. Mr. White's duties included development of the GIS Database, working with Mr. Caldwell on the proposed trail routes and compilation of the Master Plan Report.

### 5.2 Geographic Information System (GIS) Database

The Consultants developed a GIS database of the region using existing Luzerne County parcel mapping, PAMAP aerial photography, USGS Topography, NRCS soils mapping, and other pertinent data. Digital photos documenting proposed trail routes, structures, amenities, and surrounding points of interest throughout the project were taken and their locations were incorporated into the GIS Database. This GIS Database was used for mapping throughout the planning and design process.

### 5.3 Public Participation

#### 5.3.1 Public Meetings

PEC organized and hosted a public meeting on May 19, 2008 to provide information about the project and solicit input from the community. Held at the Luzerne County Annex Building, the meeting was attended by representatives from impacted municipalities, local business leaders, neighborhood and community groups, and adjacent property owners.

The Project Consultants attended this public meeting to provide technical assistance and answer questions. A brief demonstration of the project's GIS Database was given followed by an open discussion about the goal of the project. Minutes from the Public Meetings have been included in Appendix A of this report.

#### 5.3.2 Trail Steering Committee Meetings

A Trail Steering Committee was selected by the Northeastern Regional Office of the Pennsylvania Environmental Council (PEC). Members of the Steering Committee included representatives from impacted municipalities, local business leaders, neighborhood and community groups, and adjacent property owners. Table 5-1 contains a list of the individuals which were named to this committee. A series of four Steering Committee meetings were organized by PEC and facilitated by Project Consultants. A portable GIS system was used by the consulting team to provide interactive GIS presentations during Committee meetings. This technology provided instantaneous access to invaluable information needed to make key decisions in the trail planning process.

The Committee provided local insight into regional issues that impacted the project. Key Destinations, Preferred Trail Routes and other key decisions were made by the Trail Steering

Committee. The minutes from the Trail Steering Committee meetings have been included in Appendix A of this report.

***Table 5-1. Greater Kingston Area Trail / Greenway Steering Committee***

<b><u>Name</u></b>	<b><u>Organization</u></b>
Bonnie Arnone	Luzerne Borough
Sen. Lisa Baker	PA State Senate
Allen Bellas	Redevelopment Authority of Luzerne County
Raymond Bernardi	Wyoming Area School District
Gene Breznay	Swoyersville Borough
Jim Brozena	Luzerne County Flood Protection Authority
James Caldwell	RETTEW Associates
Vinnie Cotrone	River Front Parks
Patricia Cresho	Larksville Borough
Jackie Dickman	Earth Conservancy
Mark DiPippa	Wyoming Valley Montessori School
Cindy Dunlap	DCNR
Dale Freudenberger	D&L Heritage Corridor
Andy Gegaris	Luzerne County Recreation Department
James Jones	Good Shepherd Academy
Paul Keating	Kingston Borough
Lance Kittelson	Susquehanna Warrior Trail Council
Leo Kucewicz	Sen. Ralph Musto's Office
Leo Martin Jr.	Edwardsville Borough
Adrian Merolli	Luzerne County Planning Commission
Rep. Phyllis Mundy	PA House of Representatives
Andrea Nerozzi	Wyoming Seminary
Lorne Possinger	DCNR
Hank Redulski	City of Wilkes-Barre Health Department
Judy Rimple	Anthracite Scenic Trails Association
Davida Roberts	Kingston Borough
Michelle Schasberger	Wyoming Valley Wellness Trail Partnership
Bob Skulsky	D&L Heritage Corridor
William Sordoni	Sordoni Foundation
Larry Spaciano	Dallas Area Municipal Authority
Denise Sym	Forty Fort Borough
Karen Szwest	West Side Trail Commission
Mike Thomas	Rep. John Yudichak's Office
David Tosh	Wyoming Valley West School District
George White	White Environmental Services

### 5.3.3 Key Person Interviews

Various representatives from the Greater Kingston area as well as community organizations participated in the planning process through the steering committee meetings. Therefore, the steering committee determined it was not necessary to conduct extensive key person interviews. However, PEC conducted key person interviews with the following five (5) individuals:

- **Mike Dziak, President CEO, Earth Conservancy (EC)** – EC leads communities in the reclamation of mine-scarred lands and streams, returning strong economic, environmental and social value by creating a well-planned vibrant valley protected by green ridge tops.



- **Dale Freudenberger, Heritage Projects Manager/Anthracite Alliance Coordinator, Delaware and Lehigh National Heritage Corridor (D&L)** – D&L is a 501 (c)(3) non-profit that is building the D&L Trail and fosters stewardship of historical, cultural and natural resources along the historic canals and railroads that transported anthracite coal from mine to market in Eastern Pennsylvania.
- **Lance Kittelson, Vice President, Susquehanna Warrior Trail (SWT)** – SWT builds and maintains an 18 ½ mile hiking and biking trail for the benefit of the public in the Southern Wyoming Valley of Luzerne County.
- **Karen Szwast, West Side Trail Project Manager, West Side Trail Commission (WSTC)** – WSTC provides for operation and administration of the West Side Trail and future recreational programming as the participating entities may agree.
- **Carol Husa, Program Manager, Steps to a HealthierPA Luzerne County (Steps)** – Steps was the first federal program (CDC) to fund an integrated approach to evidence-based chronic disease prevention and health promotion at a community level focused on bringing together all different sectors of the community; schools, workplaces, recreation, health care/insurance, local government, etc. to implement sustainable program and policy change in order to improve health.

All of the interviewees agreed that a trail/greenway would benefit their respective organizations as well as their respective constituents. Many of the respondents indicated that providing trail opportunities and supporting trail connectivity is a part of their missions. The respondents indicated that the development of the Greater Kingston trail will advance the goal of having an interconnected trail/greenway system throughout the Greater Wyoming Valley. According to the respondents, the trail/greenway provides an opportunity for local citizens and visitors to recreate thereby improving overall community health, broadening local transportation options and improving the use of outdoor spaces that are connected through the system, as well as, benefiting our regional economy. One respondent remarked that, “linking trails together greatly magnifies the benefit of the individual trail.”

All of the respondents regularly use and/or promote the existing trail facilities through special event programming, reaching out to various groups such as Boy and Girl Scouts, local schools, biking groups, etc. for potential project opportunities, as well as, advocating for complete street design, traffic calming techniques and safe routes to school. Several respondents promote their trails via websites, as well as, through the media.

Most of the interviewees felt that the state of bicycle and pedestrian mobility within the region was improving however a coordinated effort of trail developers and promoters would definitely benefit trail usage. Other respondents, although acknowledging that residents are more supportive of trails due to the recreational and physical activity opportunities they provide, raised concerns regarding safety, need for education, disparities/differences between facilities in urban, suburban and rural areas, provision of mode connections (i.e. bike racks on busses), need for connections to schools, retail areas and businesses in order to facilitate the use of alternate forms of transportation to these areas and the need for connections to other trails and parks to expand recreational opportunities.

Most stated that they would like to see the following facilities/amenities and/or linkages for the trail/greenway: good signage (trail and interpretive), improved safety, benches, lighting, trees, barrier-free for “differently-abled” people, parking and connections to schools, parks, shopping centers, work places, and clearly marked connections to existing trails. The number



one concern of the respondents was safety however the need for funding was also a concern for some of the respondents.

When asked as whether or not the respondents felt that their respective organizations would be interested in participating in the long-term management and maintenance of the trail all the respondents indicated that they would be supportive.

In summary, the key persons offered valuable input towards how this plan targets where bicycle and pedestrian facilities should be located and recommending the proper facility type for those locations.

### **5.3.4 Public Survey**

A major component of the Plan was to determine what the priorities of local citizens were with regards to the trail including potential trail alignments, trail amenities, connections and other general issues and concerns regarding the development of the trail. This goal was accomplished by distributing a public survey during the planning process for the project.

Public surveys were distributed via a variety of means including distribution by steering committee members to their respective service populations. PEC also partnered with Action Communities for Health, Innovation & Environmental Change (ACHIEVE), Steps to a HealthierPA (STEPS) Luzerne County, Partners for a Healthy Luzerne County, Wilkes-Barre Family YMCA and the Wyoming Valley Wellness Trails Partnership to distribute surveys during the following two public events held in the City of Wilkes-Barre, the River Common Grand Opening Ceremonies for the riverfront park along the Susquehanna River on June 19, 2009 and the Diversity Picnic held in Kirby Park on June 27, 2009. STEPS and ACHIEVE worked with PEC to add trail related questions to their Community Health Assessment survey which was distributed during both of those events.

Additionally, the survey was distributed during the annual RiverFest event held in Nesbitt Park in Wilkes-Barre in June 2009 and made available at the Wilkes-Barre YMCA. Over 290 surveys were completed and evaluated. 259 surveys were received as part of the Community Health Assessment survey and were tabulated by STEPS and 39 surveys were received from the other venues and were tabulated by PEC staff.

Based on an analysis of the survey data received, the average age of survey respondents was forty-one (41) years old, and of the respondents that indicated gender, the majority was female (62%). The public survey responses indicated that current users of existing trails indicated that they use the trails on a weekly basis, at a minimum. The survey respondents also indicated that they utilize the trails on a fairly consistent basis both throughout the week, as well as, throughout the day. Based on these findings there does not appear to be a peak time for trail usage.

The survey respondents were questioned as to which amenities were important for inclusion in any trail/greenway that would be developed. The most requested feature for inclusion in the trail/greenway was benches (70.5% of responses) spaced approximately ½ mile apart. The majority of the respondents indicated that benches were a very important amenity to be included in the trail/greenway. The need for fencing to be included in the development of



the trail/greenway was not a priority for the respondents with only 16.8% of respondents listing it in their survey response. The other amenities that received a high priority according to the survey responses were garbage cans (65.1%), restrooms (64.7%), mile markers (60.6%) and lighting (59.9%).

Some survey respondents also provided additional comments recommending other amenities/considerations that should be included in the development of the trail/greenway. The comments included the need for a dog park, installation of water fountains, installation of exercise stations, play areas in appropriate areas along the trail, installation of artwork that can also serve as play structures, placement of cigarette receptacles, provision of bicycle parking facilities, consideration and design for the needs of the handicapped and finally the importance of installing new sidewalks where necessary and maintenance of existing sidewalks.

The following table provides a breakdown of the percentage of response for each of the amenities listed in the public survey.

***Table 5.2: Public Survey Results - Trail Amenities***

<b>Amenities included in trail/greenway</b>	<b>% of Responses</b>
Benches	70.5%
Garbage cans	65.1%
Restrooms	64.7%
Mile markers	60.6%
Lighting	59.9%
Pet waste disposal	56.5%
Picnic areas	55.1%
Directional trail signage	52.7%
Historical/interpretive signs	51.7%
Native plant landscaping	47.6%
Parking at trailheads	47.6%
Emergency phones	45.2%
Information kiosks	41.1%
Shelters	40.8%
Bird houses	40.8%
Community garden	37.7%
Fishing access areas	32.9%
Artwork (murals, sculptures)	29.5%
Fencing	16.8%

The survey respondents were also questioned as to potential connections for the trail/greenway. Based on the data analysis, parks were the highest priority with regards to being connected to the trail/greenway (65.8%). The respondents also indicated that providing a connection to other trails (52.7%) and historic sites (43.5%) should be given priority in the development of the trail/greenway.

The table below provides a breakdown of the percentage of responses for potential connections listed in the public survey. As mentioned above the majority of the respondents indicated a need to connect the proposed trail to existing parks, other trails and historic sites. However respondents also favored connections, although to a lesser degree, to athletic fields, schools, residential areas, public buildings and businesses.

***Table 5.3: Public Survey Results - Potential Connections***

<b>Sites to be Connected to Trail</b>	<b>% of Responses</b>
Parks	65.8%
Other trails	52.7%
Historic sites	43.5%
Athletic fields	35.3%
Schools	32.5%
Rest areas	30.5%
Public buildings	23.6%
Businesses	18.8%

The survey respondents were also questioned as to possible locations for trail heads. The overwhelming majority of the survey respondents indicated that the trail/greenway should develop the trail locating trail heads primarily at existing parks (71.9%). However, respondents did support, to a lesser degree, trail heads at schools, municipal parking lots and libraries.

***Table 5.4: Public Survey Results - Potential Trail Head Locations***

<b>Potential Trail Head Locations</b>	<b>% of Responses</b>
Parks	71.9%
Schools	39.0%
Municipal parking lots	38.0%
Libraries	27.1%
New construction	19.9%

Several trends can also be discerned from an analysis of the survey data. The majority of the respondents indicated that their community has an identified network of walking routes which can be used safely during the day and evening. The respondents also felt that it is safe for their children to walk to school or ride their bicycles. Most respondents agreed that their community has parks, recreational facilities, shared open spaces and trails/paths that are within walking distance of their residence. Most respondents also felt that their community has various recreational facilities for use by people of all ages, thereby providing opportunities, as well as, different choices for physical activity. However, several respondents commented on the need for more information, education and promotion of the existing recreational and trail facilities in order to encourage more usage by the residents of the County. Also, the need for maintenance of existing recreational and trail facilities was a common comment by respondents. Survey respondents also indicated a need for trails to be connected so residents can travel to different areas of their communities' safely on foot or by



bicycle. Finally, the majority of survey respondents were in favor of their respective communities becoming part of a regional organization and using municipal tax dollars to maintain their parks, trails and greenways.

## **5.4 Development of the Trail Master Plan**

### **5.4.1 Project Goals and Methodology**

A Kick-off meeting was held between the Consultants and representatives from PEC to define goals for the project and identify the most effective methods for achieving these goals. The existing regional trail system was discussed and a need for linkage of the various trail systems which end in the Kingston area was identified. The GIS database and field investigations would identify potential routes to connect the existing trails and key destinations. These potential routes would then be reviewed by the Trail Steering Committee and Preferred Routes would be selected.

The defined Goals and Methodology were then outlined at the Public Meeting and open for discussion. A general consensus was reached that the primary goal of this project was to provide linkage of the existing trail systems and provide access to key destinations.

### **5.4.2 Identification of Key Destinations & Trail Connections**

Base upon information from PEC, the Steering Committee and the Public Meeting, existing trails and key destinations within the Study Area were identified. The locations of the key destinations and the routes of existing and currently proposed trails were entered into the project's GIS database.

### **5.4.3 Identification of Potential Trail Corridors**

Based upon key destinations, existing and proposed trails, existing right-of-ways, utility easements, public properties, and abandoned rail lines, the Consultants identified potential trail corridors within the study area. These corridors were reviewed by the Steering Committee and evaluated for their value in meeting the goals of the project.

### **5.4.4 Identification of Proposed Trail Route with Alternatives**

Potential trail corridors which were selected by the Trail Steering Committee were evaluated in the field by the Consultants. Site photographs of existing conditions were taken along these routes and the photos were "hot linked" into the GIS database for easy access during Steering Committee meetings and presentations. Where potential impediments to the trail were identified, alternative routes were identified for consideration by the Committee.

### **5.4.5 Identification of Property Owners**

The proposed trail system has been designed to take advantage of existing publicly owned parcels and right of ways. Many of the proposed trail alignments run within abandoned railroad right-of-ways which are currently owned by the Redevelopment Authority of Luzerne County. Therefore, the need to acquire easements from private land owners has been significantly reduced. Although agreements will be needed with each of the public entities involved, the acquisition of right of ways for the proposed trails will be much easier than if they were running through privately owned parcels.



Ownership of parcels within the proposed trail corridor was identified based upon the Luzerne County's GIS parcel data of the region. Whenever ownership of a parcel was unclear, the Consultants recommended the level of title search activity required to determine property ownership. Table 9-1 contains details about each of the properties which the proposed trail will cross, additional information about each property is also listed within each of the trail route narratives.

PEC was provided a list of property owners by the Consultant. Through various means, including direct contact and attendance at trail advisory committee meetings, PEC discussed the project with the larger land owners who represented the majority of interests as most of the proposed route is on public right-of-ways. The larger landowners included the Luzerne County Redevelopment Authority, Luzerne County Flood Protection Authority, Kingston and Forty-Fort Boroughs and (former) Luzerne County Recreation Department. This project was also featured in local venues, Barnes and Nobles, etc. for further outreach. With regard to the smaller individual land owners, they will be contacted individually when the trail project moves into the next phases.

#### **5.4.6 Physical Inventory and Assessment**

Based upon GIS data and field observations, the Consultants documented existing conditions within the proposed trail corridor and prepared mapping for presentation to the Steering Committee. Issues addressed included:

- Physiographic analysis
- Wildlife
- Infrastructure and utilities
- Environmental hazards (*need assessment for Phase I*)
- Natural features inventory
- Structures (*visual evaluation*)
- Intersections and access points.

#### **5.4.7 Selection of Preferred Trail Route**

Based upon all available information including ownership and existing conditions the Consultants conferred with the Trail Steering Committee to select Preferred Trail Routes which best met the Project Goals. Whenever feasible, key destinations were linked into the trail routes and potential trailhead locations were identified.

#### **5.4.8 Prepare a Trail Concept Plan**

Using the preferred trail route, the Consultants prepared a trail concept plan using the compiled GIS database as a base. Issues that were addressed in the plan included:

- Trail location and any alternative routes
- Proposed location of trailheads and related facilities
- Areas for trail barriers and emergency access
- Areas needing natural buffers and/or screening
- Proposed linkages to parks, schools, and neighborhoods.

This plan was then reviewed and approved by the Trail Steering Committee.

#### **5.4.9 Final Design and Report**

The Greater Kingston Area Trail / Greenway Feasibility / Master Plan and Report were prepared by the Consultants and submitted to the Pennsylvania DCNR for their review and approval. A second Public Meeting was held to present the plan and to discuss the recommendations made in the report. Based upon comments from the PA DCNR and the Public Meeting, final revisions were made to the Plan and Report and the final draft was submitted to PEC and the PA DCNR in both hard copy and digital format.



## Chapter 6: Proposed Trail / Greenway System

### 6.1 Proposed Trail / Greenway Overview

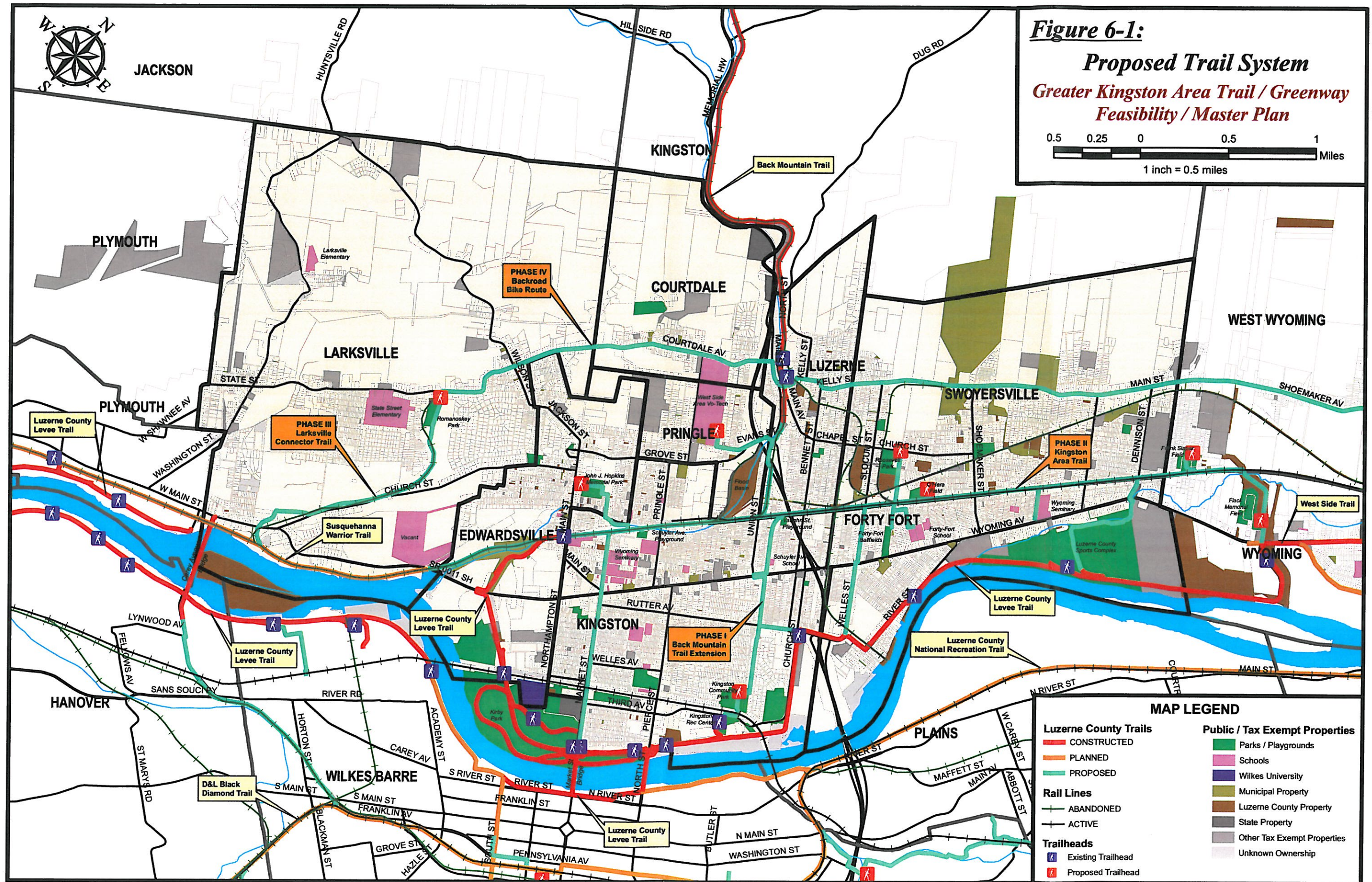
Based upon discussions with the Steering Committee, Public Meetings, Opinion Surveys and Key Person Interviews the Greater Kingston Area Trail / Greenway network has been developed (Figures 6.1 and 6.2). Two major new trails are proposed for the area: The Kingston Area Trail and the Back Mountain Trail Extension. Access to and from key destinations from these main trails will be accomplished through a series of smaller connector trails. The trail network will capitalize on the vast network of railroad right of ways using both abandoned and active lines. Sidewalk improvements and on-street bicycle lanes have been proposed for many of the connector trails.

Details of each of the trails in the proposed network follow:





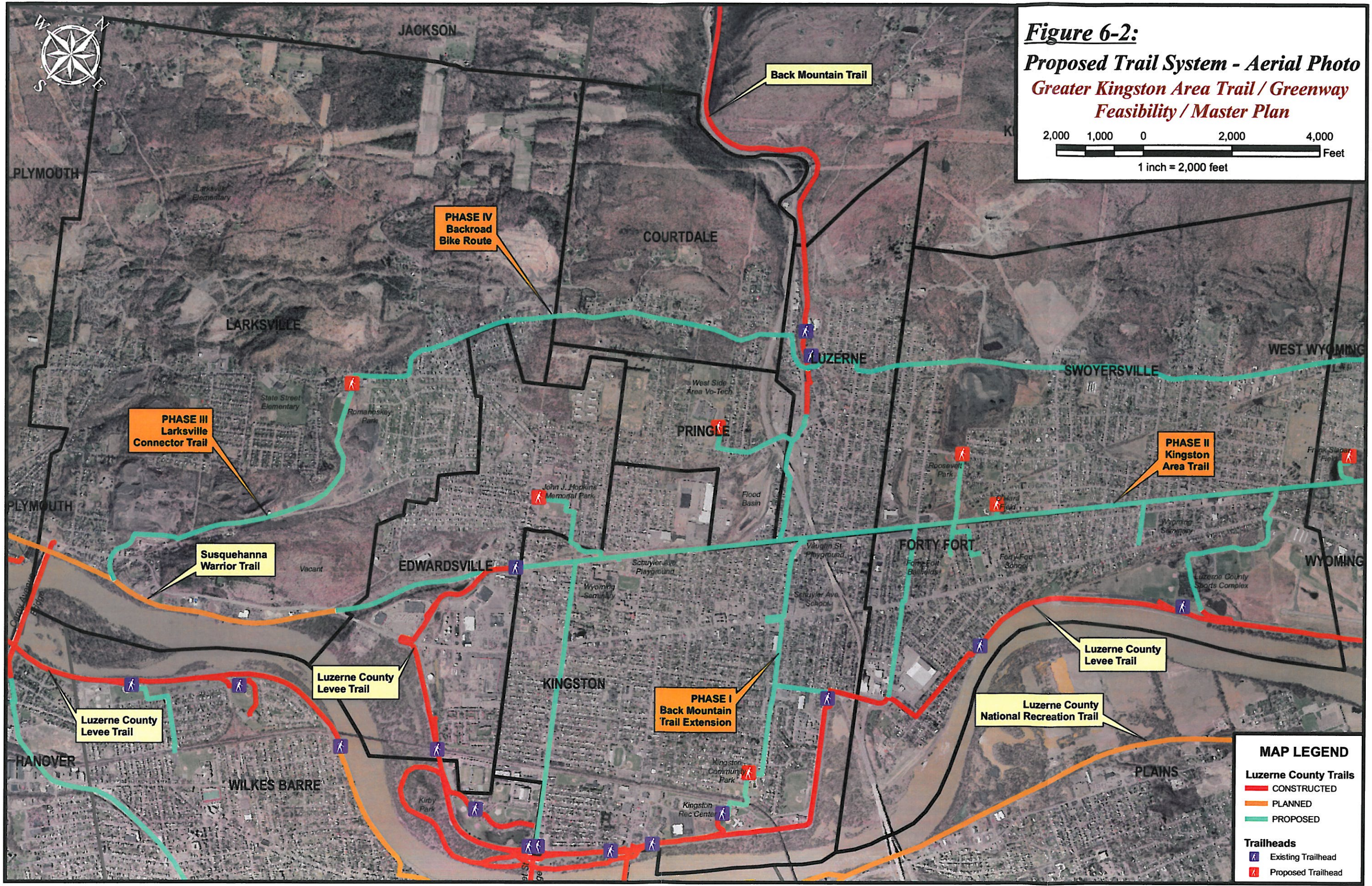




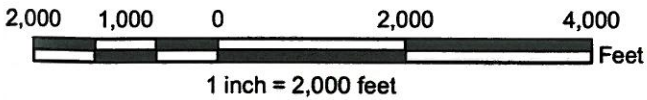








**Figure 6-2:**  
**Proposed Trail System - Aerial Photo**  
**Greater Kingston Area Trail / Greenway**  
**Feasibility / Master Plan**



**MAP LEGEND**

**Luzerne County Trails**

- CONSTRUCTED
- PLANNED
- PROPOSED

**Trailheads**

- Existing Trailhead
- Proposed Trailhead



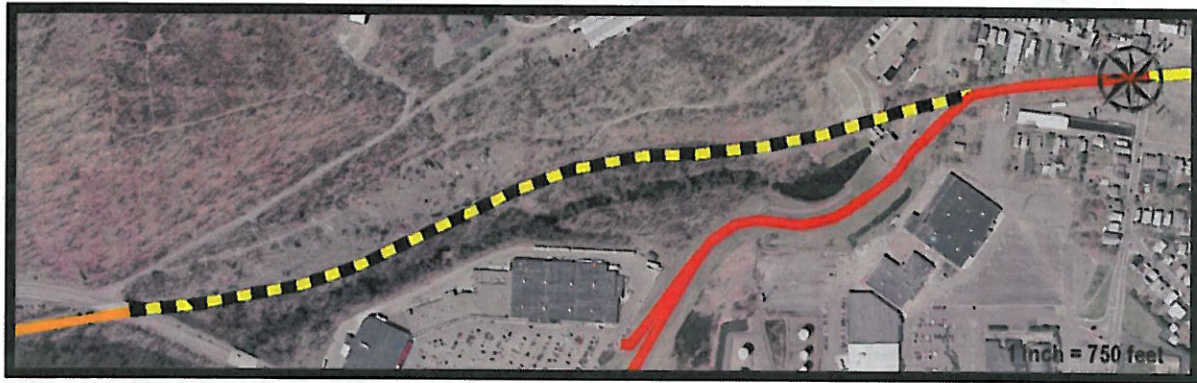




## 6.2 Kingston Area Trail

The Kingston Area Trail will serve as the North / South spine of the proposed trail network. Beginning at the proposed terminus of the Susquehanna Warrior Trail at State Route 11 in Larksville Borough the trail will run 5.7 miles north through the study site to the intersection of the West Side Trail and the Luzerne County Levee Trail in Wyoming Borough. Most of this trail will follow railroad right of ways with the last section of trail following an existing flood levee. To best describe this trail alignment, it has been broken into five segments based upon existing conditions.

### Kingston Area Trail: Section I - State Route 11 to Existing Levee Trail



**Figure 6-3:** PAMAP Aerial Photography showing the proposed alignment for Section I of the Kingston Area Trail.

This section of trail will be built upon an abandoned railroad grade from the Route 11 Bridge in Larksville Borough to the existing Levee Trail in Edwardsville Borough.

**Distance:** 0.68 miles

**Existing Surface:** Gravel & Dirt Abandoned Railroad ROW

#### **Surrounding Land Use / Land Cover:**

The trail is proposed on an abandoned rail grade which is surrounded by disturbed land and shrub / scrub vegetation. To the west of the alignment is undeveloped land and to the east are Toby Creek and a retail shopping plaza.

#### **Ownership:**

<u>Property ID</u>	<u>Owner</u>
38H9 00A00A000	PGW Co. Trustee 1 PEI Center Wilkes Barre, PA 18711-0600
18H9 00A00B000	Redevelopment Authority of Luzerne County 16 Luzerne Avenue West Pittston, PA 18643-2817

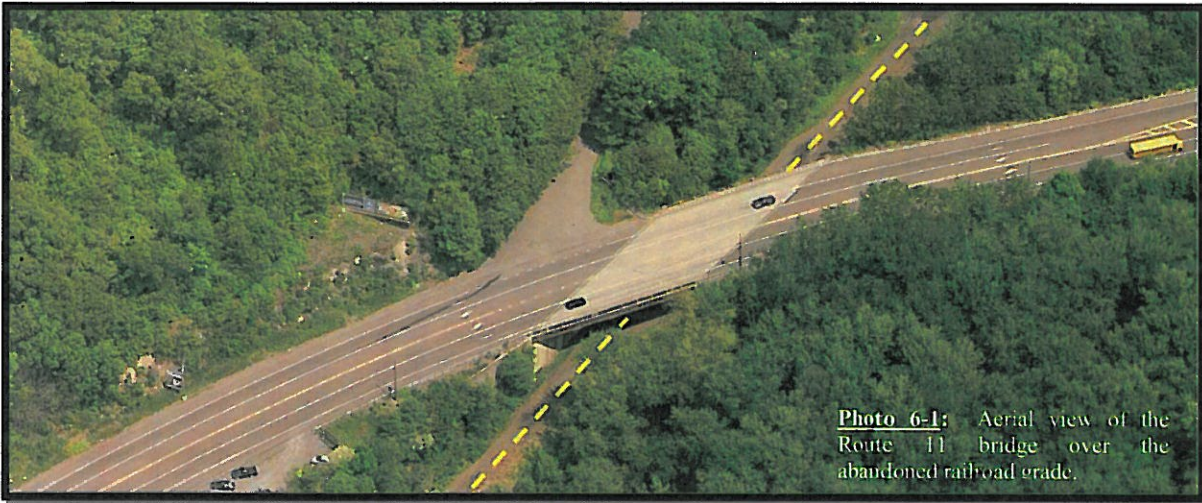


**Proposed linkages:** Susquehanna Warrior Trail (*planned*)  
Luzerne Levee Trail (*constructed*)

**Erosion and drainage problems:** None Noted

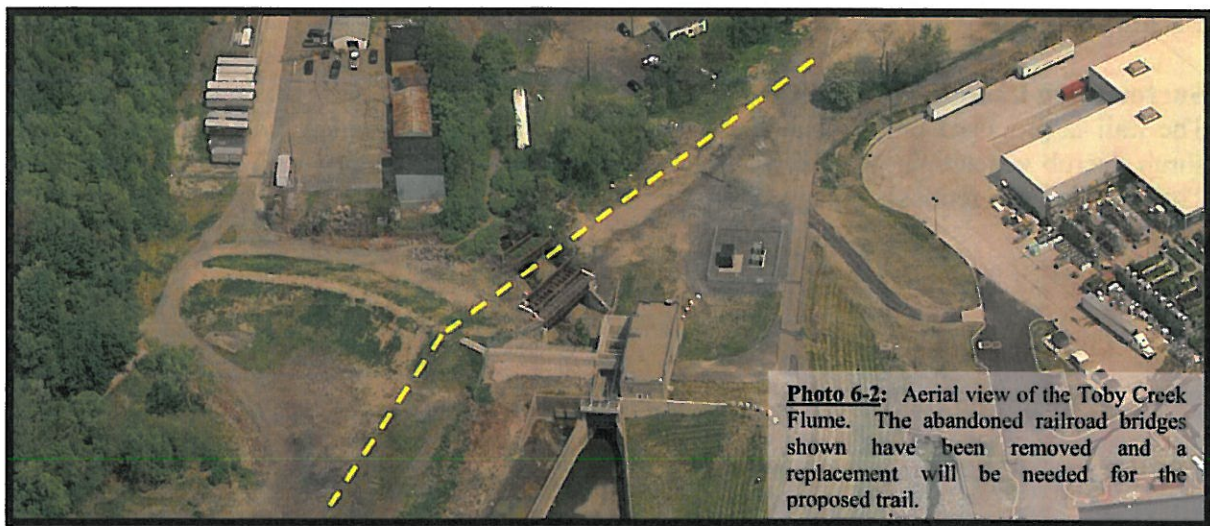
**Structures:**

Route 11 Bridge: This PennDOT bridge carries State Route 11 over the abandoned railroad grade. PennDOT recently hired RETTEW to design a replacement for this four lane bridge. New bridge designs will include considerations for safe trail passage under Route 11.



**Photo 6-1:** Aerial view of the Route 11 bridge over the abandoned railroad grade.

Flood Flume: The railroad bridge over the Toby Creek flume has been removed. However, the concrete footers are still in place. Therefore, construction of a footbridge over this feature should be fairly uncomplicated.



**Photo 6-2:** Aerial view of the Toby Creek Flume. The abandoned railroad bridges shown have been removed and a replacement will be needed for the proposed trail.



**Natural Features:**

This proposed section of trail is located on a section of abandoned railroad along the northwestern bank of Toby Creek. Historically, there were several rail tracks in this area so the land has been significantly disturbed. Stabilization of the site for the trail and supplemental planting along Toby Creek would significantly enhance the area.

**Alternative Routes:**

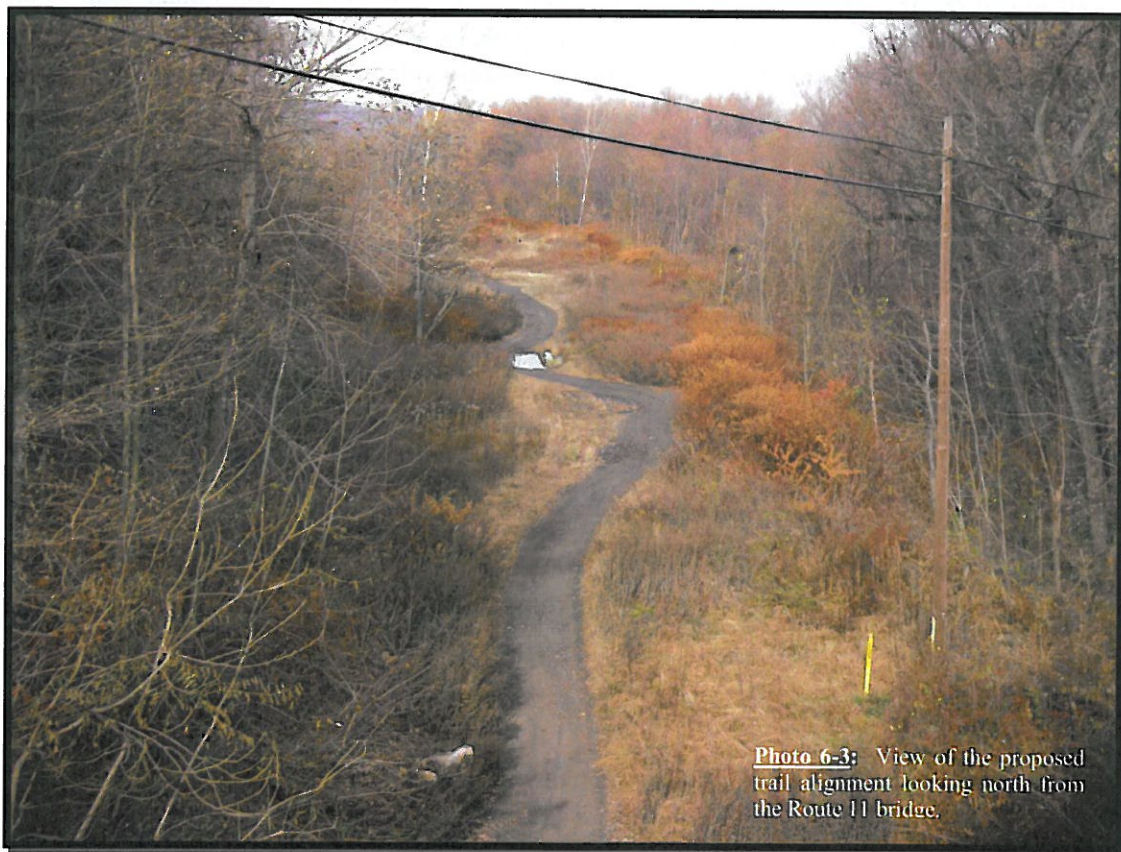
No alternative routes have been identified for this section of proposed trail. Sufficient room exists on the site and preliminary discussions with the Redevelopment Authority indicated that they are supportive of trails in the region. Additional negotiations with the Redevelopment Authority will be necessary to authorize trail construction on this site.

**Proposed Design:**

- Pathway Surface
  - 0.68 mile of 10' Crushed Stone trail
- Structures
  - 56'± Pedestrian Bridge over the Toby Creek Flume
- Auxiliary Facilities
  - Revegetation along western bank of Toby Creek

**Environmental Hazards:**

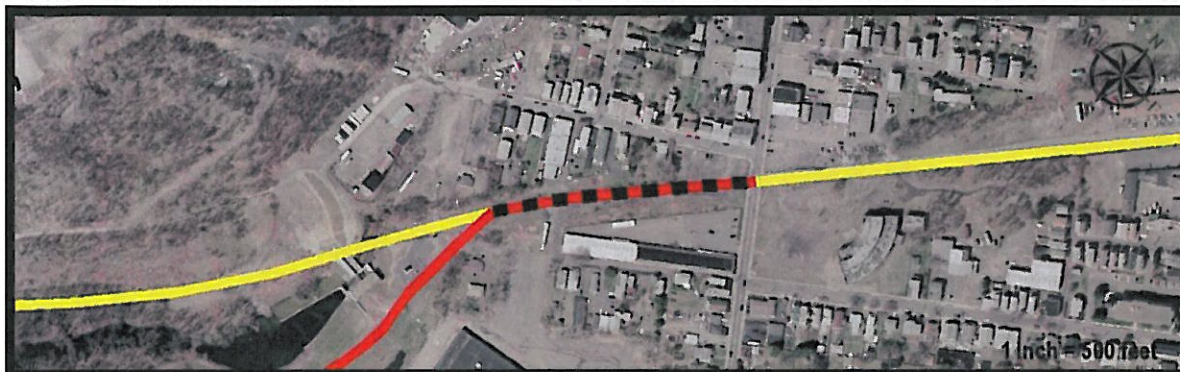
Due to the historic industrial use of this site, a Phase I Environmental Assessment of the trail right of way is recommended prior to development.



**Photo 6-3:** View of the proposed trail alignment looking north from the Route 11 bridge.



## **Kingston Area Trail: Section II - Levee Trail to Main Street, Edwardsville**



**Figure 6-4:** PAMAP Aerial Photography showing the proposed alignment for Section II of the Kingston Area Trail.

This segment of the trail will use existing Luzerne County Levee Trail to its terminus at Main Street in Edwardsville. There is a potential to use a property at the corner of Main St. and Plymouth St for parking. No improvements to the existing trail are proposed.

**Distance:** 0.14 miles

**Existing Surface:** 10' Pavement

### **Surrounding Land Use / Land Cover:**

This portion of the trail will use an existing section of the Luzerne County Levee Trail. On the western side of the trail is a residential area which faces away from the trail. Vacant land, a commercial building and a small church border the eastern side of this section of trail.

### **Ownership:**

<u>Property ID</u>	<u>Owner</u>
18H9 00A00B000	Luzerne County Flood Protection 200 North River Street Wilkes Barre, PA 18711-0600
18G9S4 00601C000	Redevelopment Authority of Luzerne County 16 Luzerne Avenue West Pittston, PA 18643-2817
6 acre Lot Corner of Main St and Plymouth St	Unknown Owner

**Proposed linkages:** Main Street, Edwardsville

**Erosion and drainage problems:** None Noted

**Structures:** NONE



**Natural Features:**

This newly constructed trail runs along a section of abandoned railroad. Minimal brush is present along the northwestern side of the trail. A chainlink fence on the southeastern side of the trail separates the trail from a commercial building.

**Alternative Routes: NONE**

**Proposed Design:**

- Pathway Surface
  - Existing 10' Pavement – *No Improvements Proposed*
- Structures
  - NONE
- Intersections and Access Points
  - NONE
- Auxiliary Facilities
  - Parking / Trail Heads
    - Designation of a trailhead with parking is feasible on the 0.6 acre lot at the corner of Main St. and Plymouth St. Ownership of this lot is not identified in the current Luzerne County Parcel data.
  - Barriers and Emergency Access
    - Balusters currently restrict access to this section of trail from Main Street.
  - Natural Buffers and/or Screening
    - Supplemental planting along this section of trail would significantly enhance the area. Plantings along northwestern side of trail would provide screening for adjacent residential area.

**Environmental Hazards:**

Due to the historic industrial use of this site, a Phase I Environmental Assessment of the parking area is recommended prior to development.



Photo 6-4: Looking northeast towards Main Street along the existing Levee Trail.



### **Kingston Area Trail: Section III - Main St., Edwardsville to Sharpe St., Kingston**



**Figure 6-5:** PAMAP Aerial Photography showing the proposed alignment for Section III of the Kingston Area Trail.

This section of the Kingston Area Trail will begin at the terminus of the Luzerne County Levee Trail at Main Street in Edwardsville and travel northeast through Kingston Borough on an abandoned railroad grade. Although much of the trail is proposed on private property, the configuration of these lots significantly reduce their development potential. At grade road crossings will be necessary at Main, Pringle, Division and Union Streets. At Sharpe Street in Kingston, the trail will begin paralleling an active rail line.

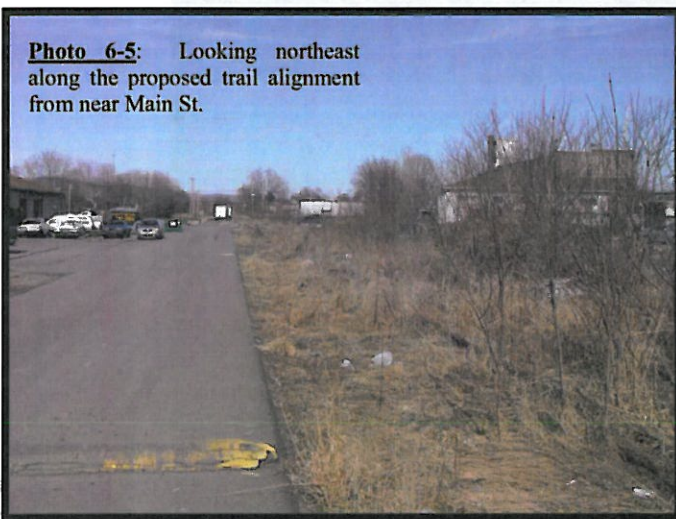
**Distance:** 0.94 miles

**Existing Surface:**

Abandoned Railroad ROW with rail & ties in place, however the majority of the ballast is missing.

**Surrounding Land Use / Land Cover:**

This section of trail will run along an abandoned railroad grade. Most of the rail and ties are still in place from the original tracks. Between Main Street and Pringle Streets, a private driveway



**Photo 6-5:** Looking northeast along the proposed trail alignment from near Main St.

runs along the northwestern side of the proposed route. On the southeastern side of the trail are commercial properties and land currently owned by the Wyoming Seminary. From Pringle Street to the end of this segment, commercial and industrial development border northwestern side of the proposed route and the other side of the trail is predominantly residential development. Along much of this segment of trail, Brook and Railroad Avenues create a buffer between the proposed trail route and existing residential development.



**Ownership:**

<u>Property ID</u>	<u>Owner</u>
34G9SE401423F00	Wyoming Seminary 201 N. Sprague Ave. Kingston, PA 18704
34G9E401423E00	David Kovalchick 240 Schuyler Ave Kingston, PA 18704
34G9 00A00A000 (2 lots)	Square Deal Realty, Inc 46 Public Square Wilkes Barre, PA 18701
34G9 00A0A1000	John Graham PO Box 1910 Kingston, PA 18704

**Proposed linkages:** Market Street - Wyoming Seminary  
Hopkins Memorial Park  
Schuyler Ave Playground

**Erosion and drainage problems:** None Noted

**Structures:** NONE

**Natural Features:**

Due to the developed nature of this area, natural features are limited along his segment of trail. Shrub/Scrub vegetation has become established along this abandoned rail corridor. However, much of the vegetation which has grown in this area are invasive species.

**Alternative Routes:**

Although much of the trail is proposed on private property, the configuration of these lots significantly reduce their development potential. However, if negotiations with the land owners identified above are unsuccessful, then there is a feasible alternative route. Immediately to the northwest of this alignment is the right-of-way for tunnel which conveys Toby Creek from the flood basin in Pringle Borough to the flume in Edwardsville Borough. Although ownership of this right-of-way is not identified in the County's GIS database, it is assumed that it is controlled by the Luzerne County Flood Protection Authority.

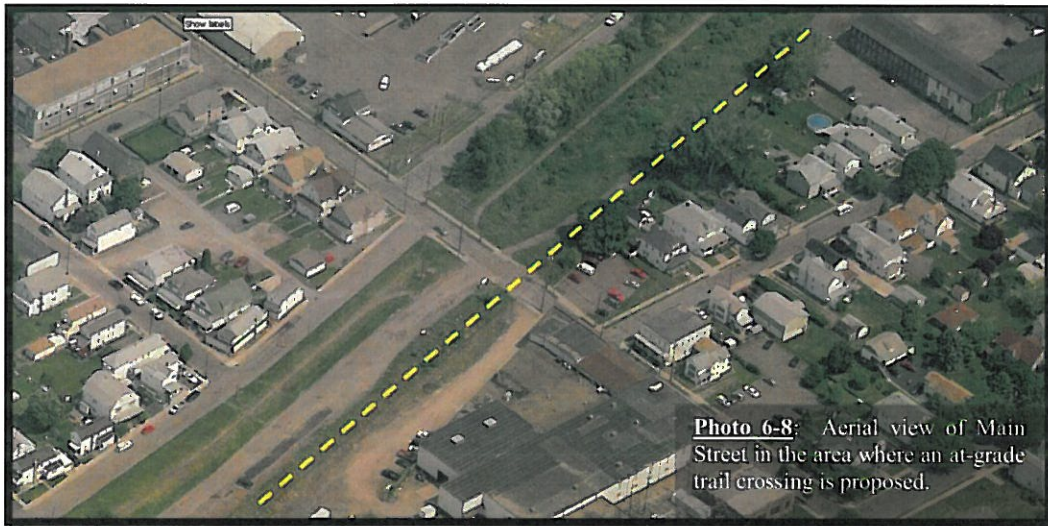
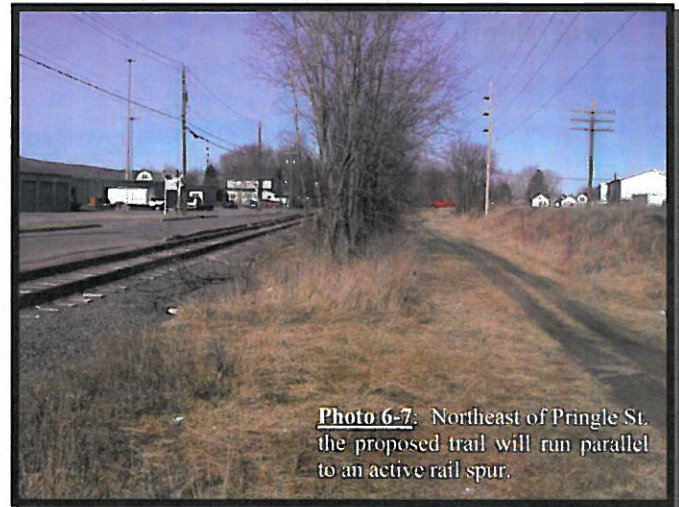


**Photo 6-6:** Looking northeast along the proposed alignment from Pringle Street.



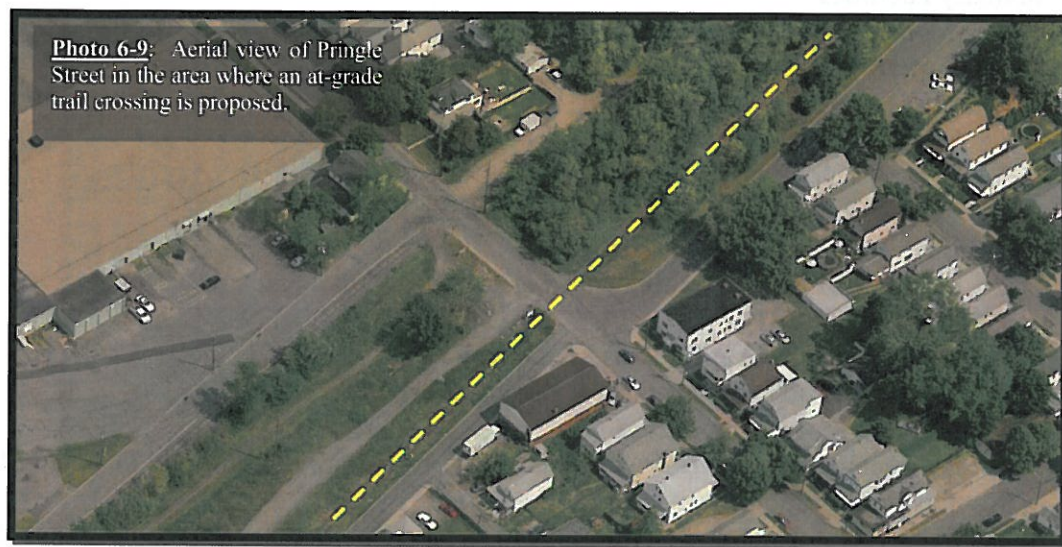
**Proposed Design:**

- Pathway Surface
  - 0.94 mile of 10' Crushed Stone trail
- Intersections and Access Points
  - **Main Street – Edwardsville**
    - State Route 1007
    - At grade crossing
    - Slightly elevated location
    - Excellent sight distance
    - Moderate Traffic Volume
    - Delineated Crosswalk Needed
    - Signage Recommended

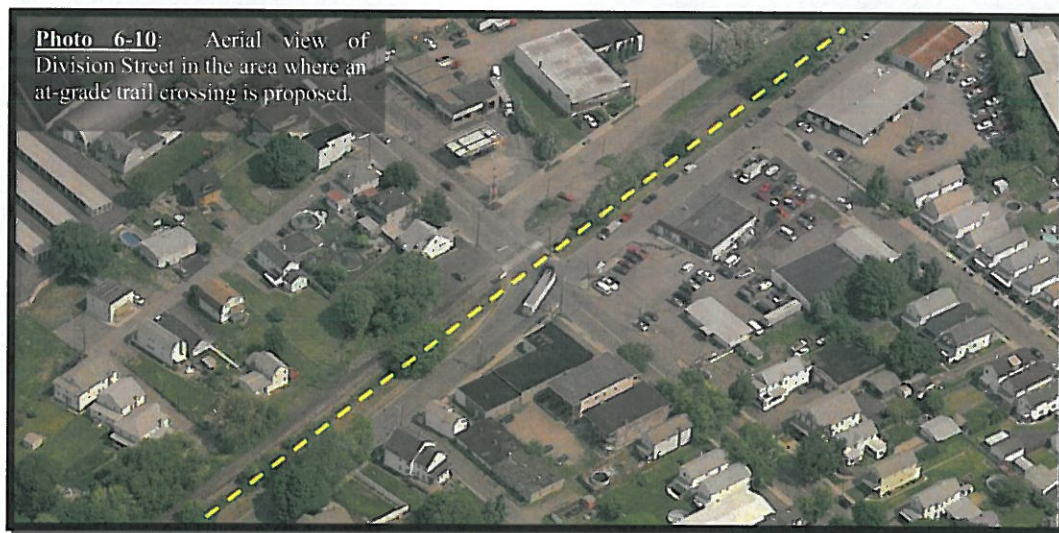


- **Pringle Street**
  - State Route K041
  - At grade crossing
  - Slightly elevated location
  - Excellent sight distance
  - Moderate Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended





- **Division Street**
  - Municipal Street (*Kingston & Pringle*)
  - At grade crossing
  - Slightly elevated location
  - Excellent sight distance
  - Low Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended





- Auxiliary Facilities
  - Restrooms
    - Currently Available at Hopkins Memorial Park
  - Water
    - Currently Available at Hopkins Memorial Park
  - Emergency Telephone
    - Currently Available at Hopkins Memorial Park
  - Lighting
    - Pedestrian Lighting recommended at all Street Crossings
  - Parking / Trail Heads
    - Parking Available at Hopkins Memorial Park
    - New Trailhead Recommended at Hopkins Memorial Park
  - Barriers and Emergency Access
    - Balusters required to restrict access to trail from Main, Pringle and Division Streets.
  - Natural Buffers and/or Screening
    - Supplemental planting along this section of trail would significantly enhance the area.
    - No screening is required on this section of trail.

**Environmental Hazards:**

Due to the historic industrial use of this site, a Phase I Environmental Assessment of the trail corridor is recommended prior to development.



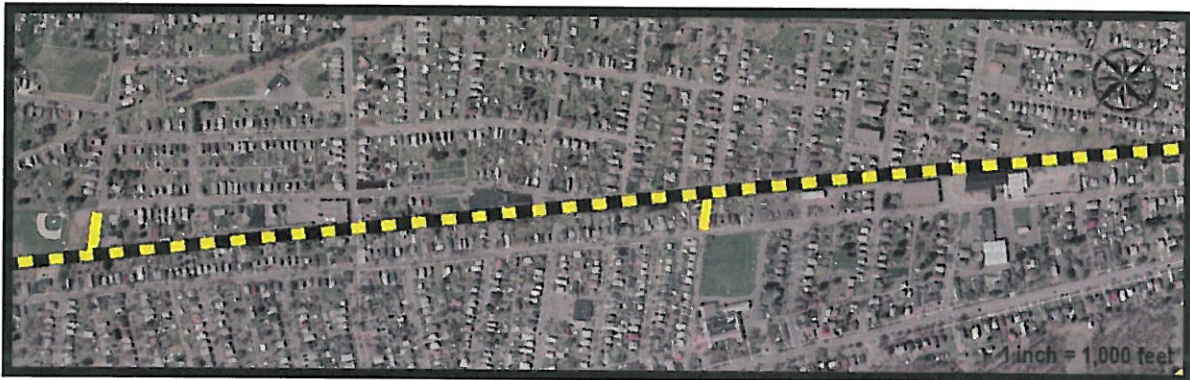
Photo 6-11: Looking northeast along the proposed alignment from Division Street.



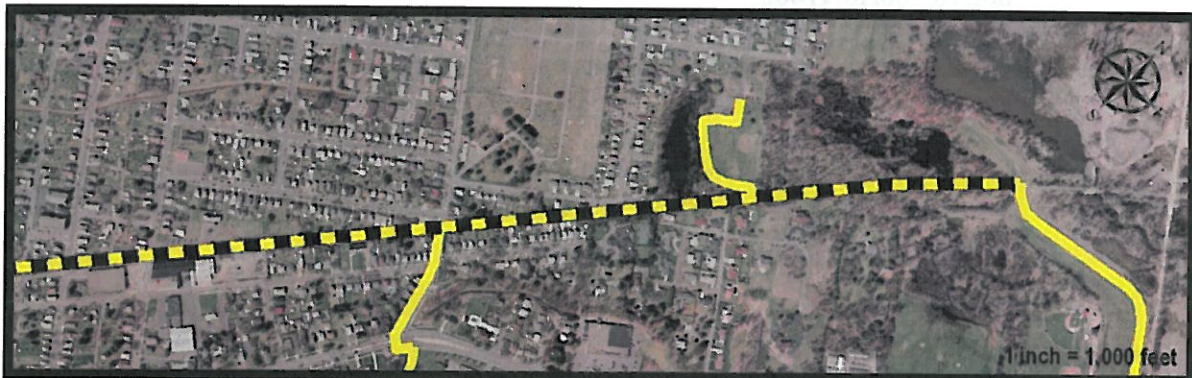
**Kingston Area Trail: Section IV - Sharpe Street to Flack Memorial Field**



**Figure 6-6:** PAMAP Aerial Photography showing the proposed alignment for Section IV-A of the Kingston Area Trail.



**Figure 6-7:** PAMAP Aerial Photography showing the proposed alignment for Section IV-B of the Kingston Area Trail.



**Figure 6-8:** PAMAP Aerial Photography showing the proposed alignment for Section IV-C of the Kingston Area Trail.

Section IV of the Kingston Area Trail will be built adjacent to an active rail spur owned by the Luzerne County Redevelopment Authority. Although current rail usage of this spur is minimal, trail design should anticipate increased usage in the future. The proposed trail route runs along the municipal boundary between Pringle, Luzerne and Swoyersville Boroughs and the Boroughs of Kingston and Forty Fort. The final half mile of this segment of trail falls outside of the project area. However, to maintain continuity in planning, this trail has been extended outside of the study area to allow for a tie-in to the Luzerne County Levee and West Side Trails.



**Distance:** 2.96 miles

**Existing Surface:** Gravel & Rail Ballast

**Surrounding Land Use / Land Cover:**

This segment of trail will be build within the right-of-way of an active railroad spur. The proposed trail alignment passes through a mix of residential, commercial and industrial development with several small community parks mixed in. Vegetation along this rail spur is actively controlled. However, existing tree rows line much of the right-of-way through the residential areas to provide buffer between the houses and this active rail line. Fencing and other landscaping features have also been installed by many homeowners to screen their view of the tracks.

**Ownership:**

<u>Property ID</u>	<u>Owner</u>
59F10 00A0B1000	Redevelopment Authority of Luzerne County 16 Luzerne Avenue West Pittston, PA 18643-2817
41G9 00A0A1000	
41G9 00A0A1000	
52G9 00A0A1000	
59F10 00A0B1000	
59F10 00A0B1000	
59F10 00A0B1000	
66E10 00A0A1000	
59F10 00A0B1000	
59F10 00A0B1000	
59F10 00A0B1000	
52G9 00A0A1000	
66E10 00A0A1000	

**Proposed linkages:** Back Mountain Trail Extension  
Roosevelt Park Connector Trail  
Forty Fort Connector Trail  
O'Hara Park Connector Trail  
Wyoming Seminary – Forty Fort Connector Trail  
Luzerne County Park Connector Trail  
Frank Slapar Field Connector Trail

**Erosion and drainage problems:**

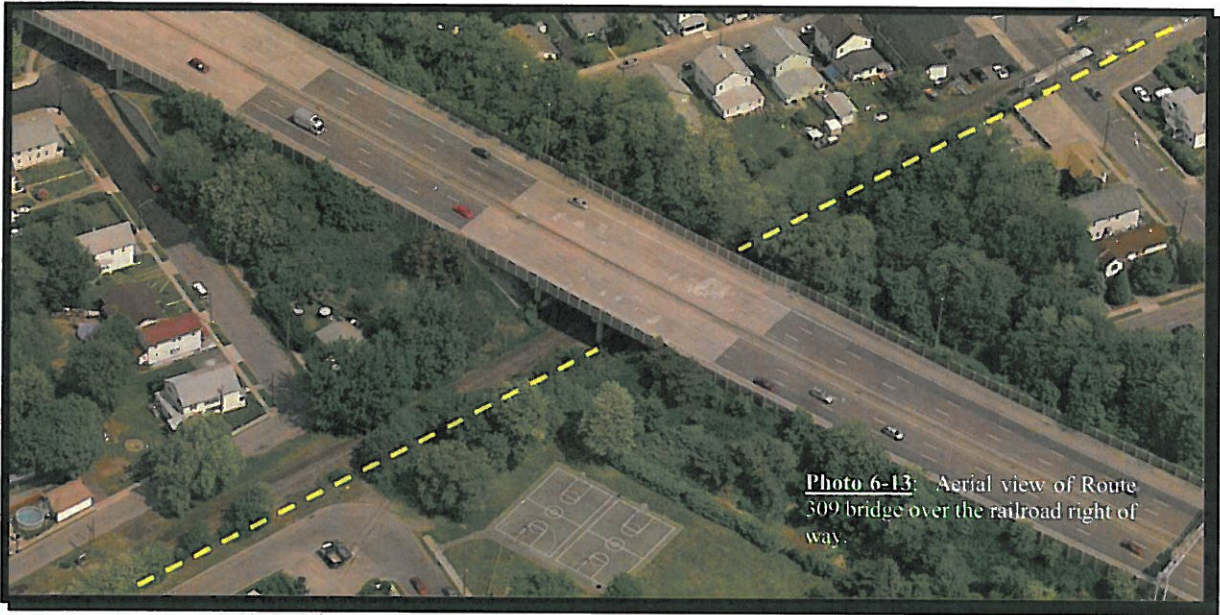
None Noted

**Structures:**

Route 309 Underpass: This PennDOT bridge carries State Route 309 over the active railroad grade. Initial evaluation of this underpass indicated that there is sufficient room to add a trail next the tracks as they pass under Route 309.





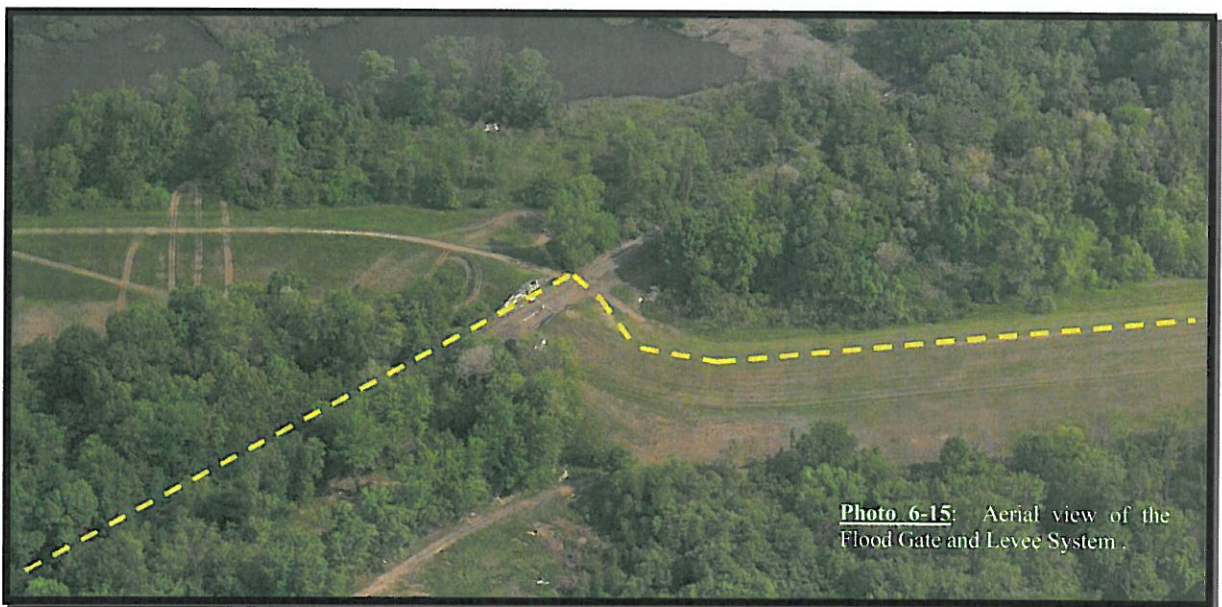


**Photo 6-13:** Aerial view of Route 309 bridge over the railroad right of way.

**Levee / Rail Flood Gate:** At the end of this segment of trail, is a flood levee. A gateway has been built into this wall to allow for passage of the railroad. In the event of flooding, temporary walls are inserted into a keyway in the concrete walls to block flood waters. The development of a trail adjacent to the rails will have no impact upon this structure.



**Photo 6-14:** Flood Gate in levee system to allow passage for rail line



**Photo 6-15:** Aerial view of the Flood Gate and Levee System.



### Natural Features:

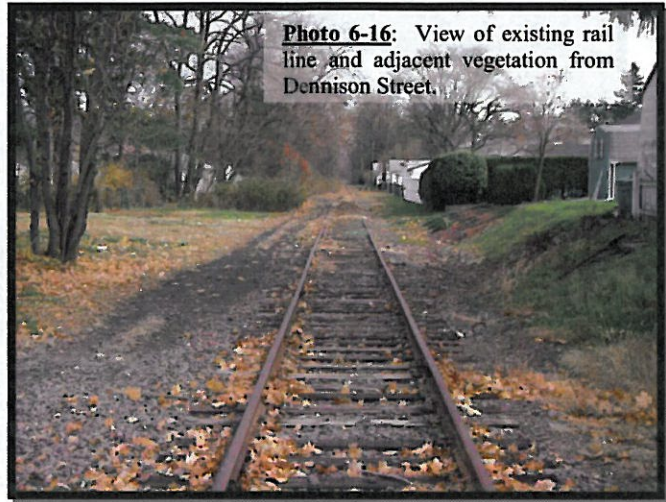
Vegetation along this rail spur is actively controlled. However, existing tree rows line much of the right-of-way through the residential areas to provide buffer between the houses and this active rail line.

### Alternative Routes:

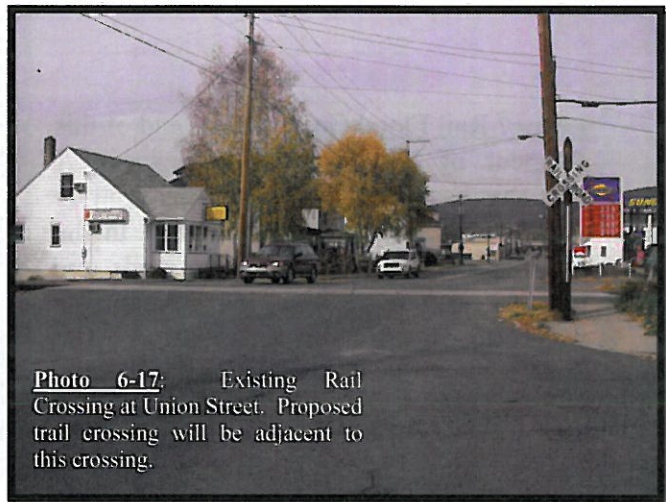
An alternative route to this section of trail has been identified. The alternative route runs from the Flood Control Basin in Luzerne, north along an abandoned railroad right-of-way. Further to the northeast in West Wyoming Borough, the abandoned rail line joins into the proposed route of the West Side Trail. However, due to private ownership issues, the preferred alternative was selected over this option.

### Proposed Design:

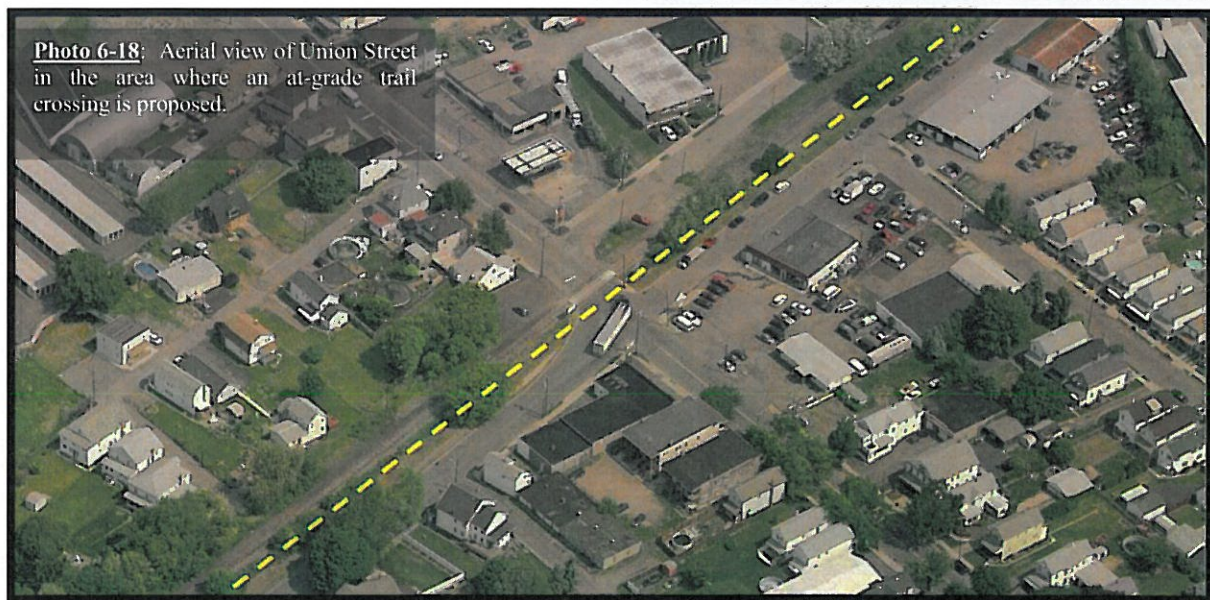
- Pathway Surface
  - 2.96 miles of 10' Crushed Stone Trail
- Intersections
  - **Union Street**
    - State Route 1013
    - At grade crossing
    - Slightly elevated location
    - Excellent sight distance
    - Moderate Traffic Volume
    - Delineated Crosswalk Needed
    - Signage Recommended



**Photo 6-16:** View of existing rail line and adjacent vegetation from Dennison Street.



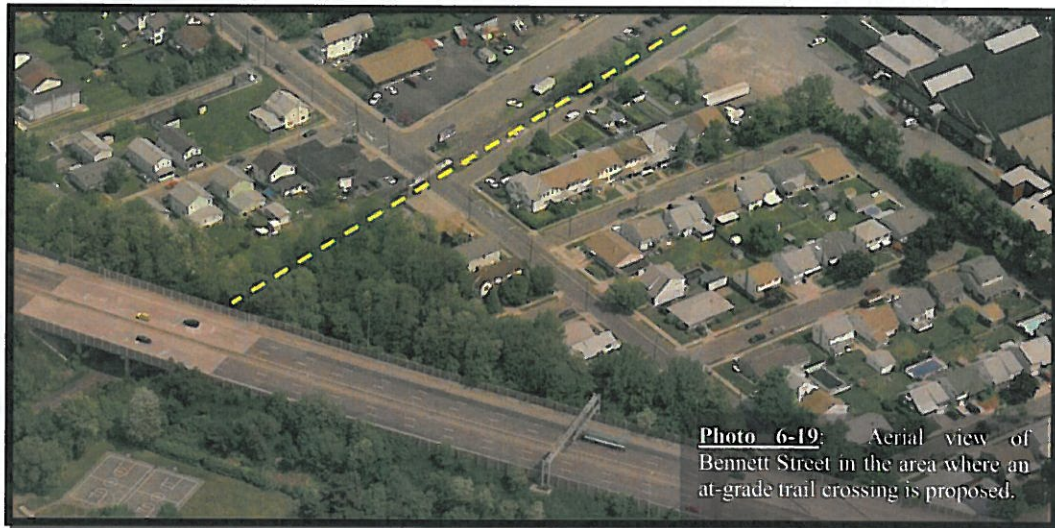
**Photo 6-17:** Existing Rail Crossing at Union Street. Proposed trail crossing will be adjacent to this crossing.



**Photo 6-18:** Aerial view of Union Street in the area where an at-grade trail crossing is proposed.

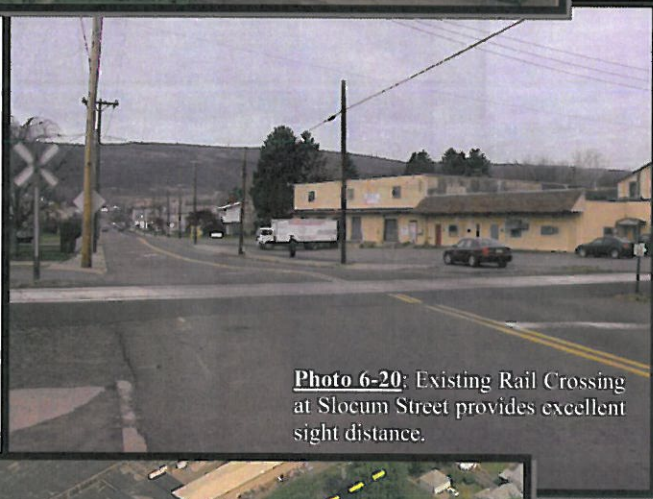


- **Bennett Street**
  - State Route 1015
  - At grade crossing
  - Slightly elevated location
  - Excellent sight distance
  - Moderate Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended



**Photo 6-19:** Aerial view of Bennett Street in the area where an at-grade trail crossing is proposed.

- **Slocum Street**
  - State Route 1017
  - At grade crossing
  - Slightly elevated location
  - Excellent sight distance
  - Moderate Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended



**Photo 6-20:** Existing Rail Crossing at Slocum Street provides excellent sight distance.

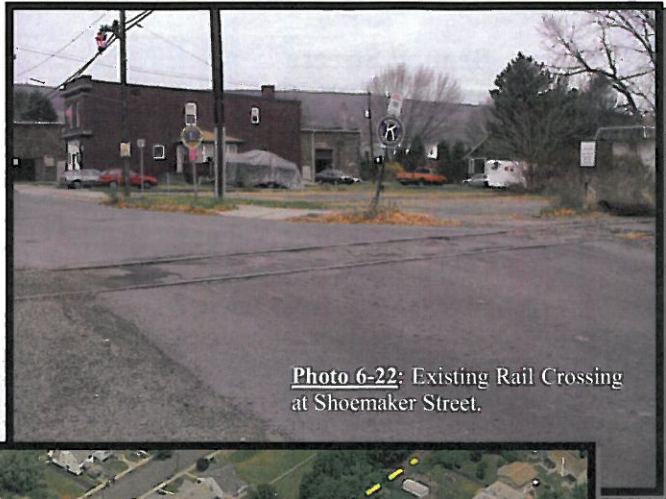


**Photo 6-21:** Aerial view of Slocum Street in the area where an at-grade trail crossing is proposed.

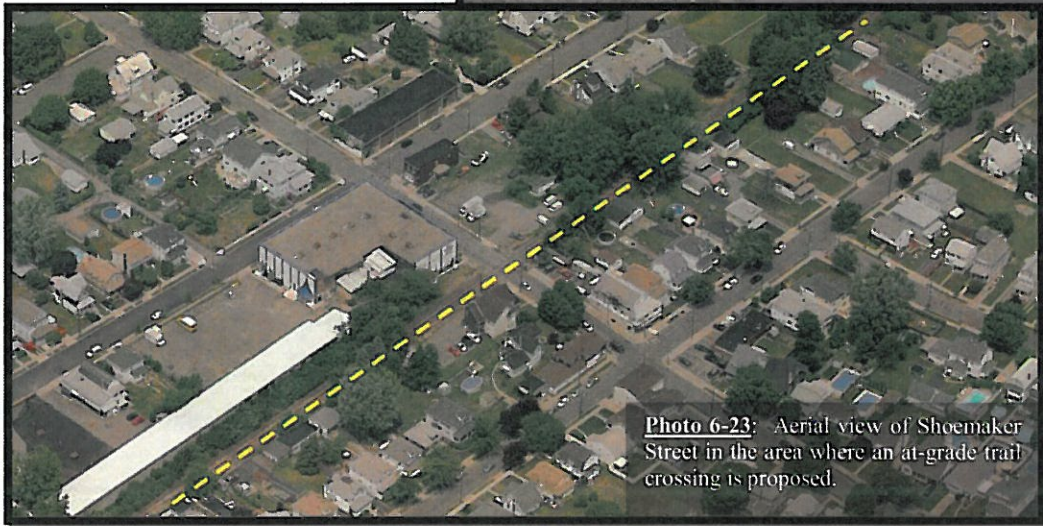


### Shoemaker Street

- State Route K049
- At grade crossing
- Slightly elevated location
- Excellent sight distance
- Moderate Traffic Volume
- Delineated Crosswalk Needed
- Signage Recommended



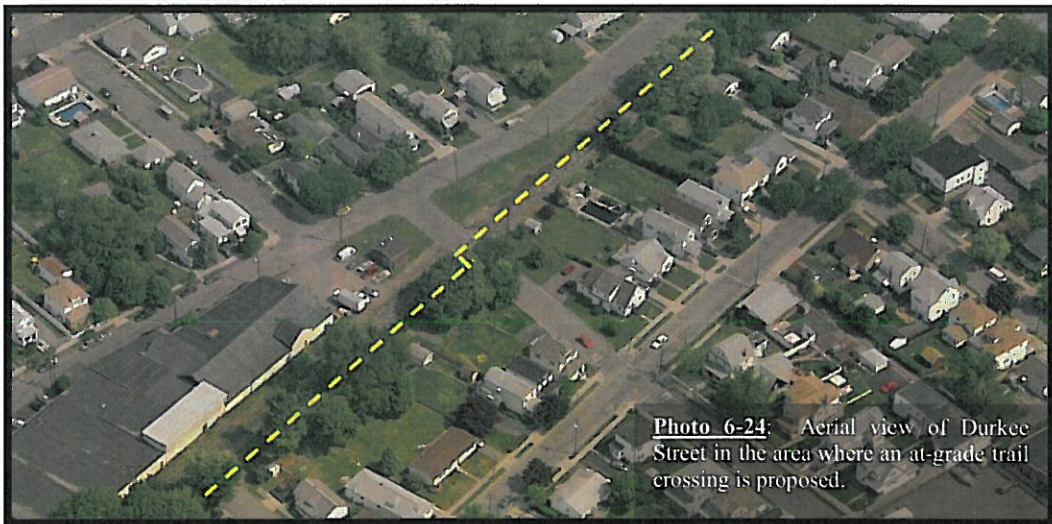
**Photo 6-22:** Existing Rail Crossing at Shoemaker Street.



**Photo 6-23:** Aerial view of Shoemaker Street in the area where an at-grade trail crossing is proposed.

### • Durkee Street

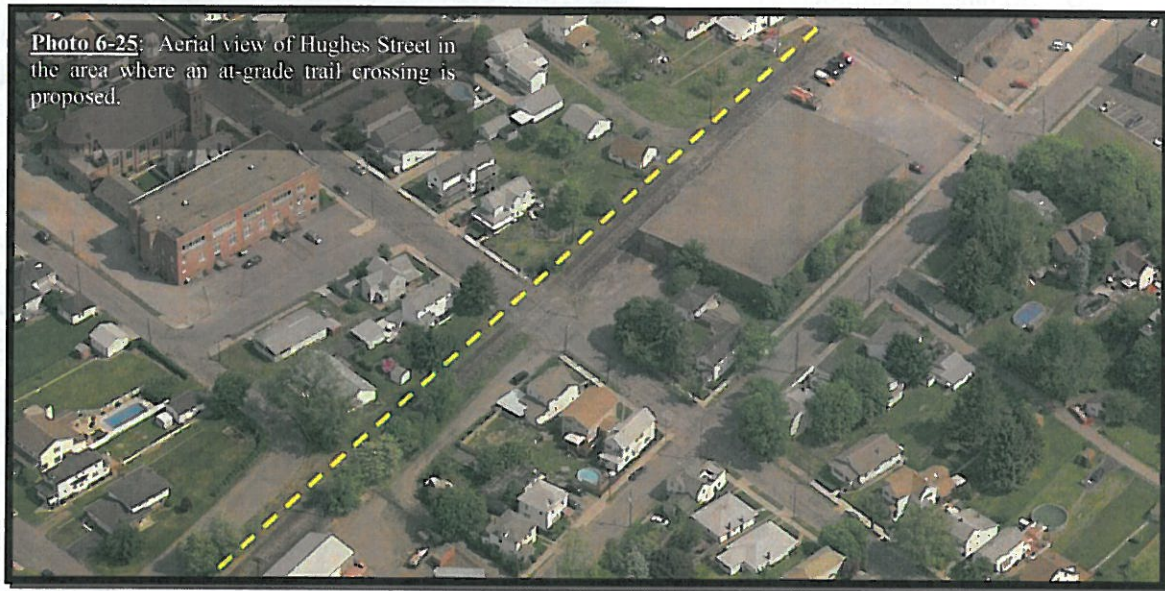
- Municipal Street
- At grade crossing
- Slightly elevated location
- Excellent sight distance
- Low Traffic Volume
- Delineated Crosswalk Needed
- Signage Recommended



**Photo 6-24:** Aerial view of Durkee Street in the area where an at-grade trail crossing is proposed.



- **Hughes Street**
  - Municipal Street
  - At grade crossing
  - Slightly elevated location
  - Excellent sight distance
  - Moderate Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended

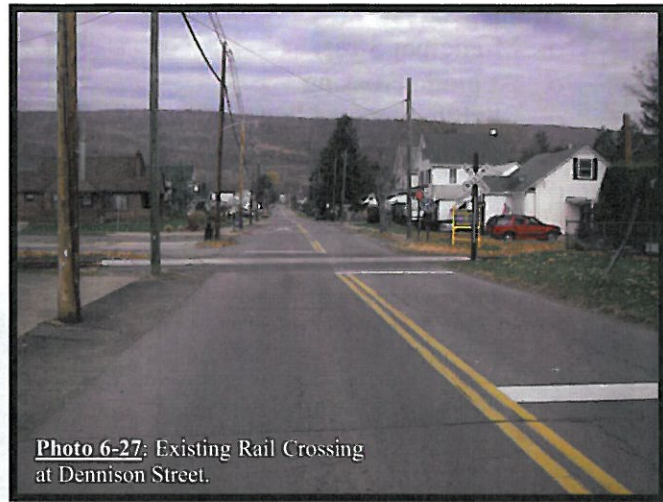


- **Owen Street**
  - State Route K051
  - At grade crossing
  - Slightly elevated location
  - Excellent sight distance
  - Moderate Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended

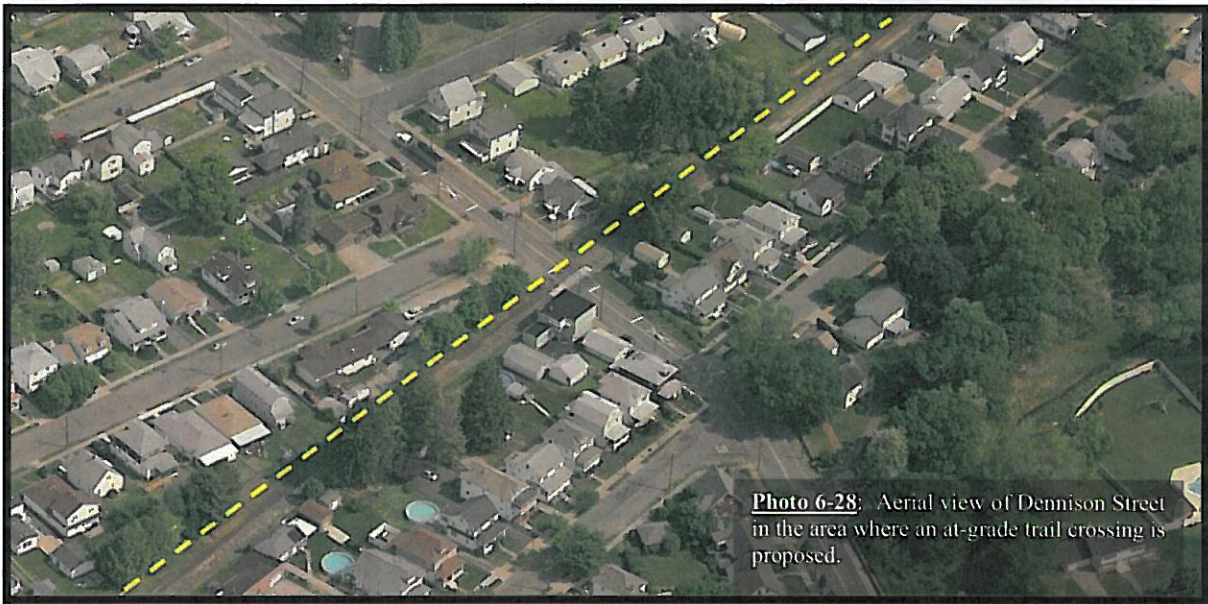




- **Dennison Street**
  - State Route 1019
  - At grade crossing
  - Slightly elevated location
  - Excellent sight distance
  - Moderate Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended



**Photo 6-27:** Existing Rail Crossing at Dennison Street.



**Photo 6-28:** Aerial view of Dennison Street in the area where an at-grade trail crossing is proposed.

- **Auxiliary Facilities**

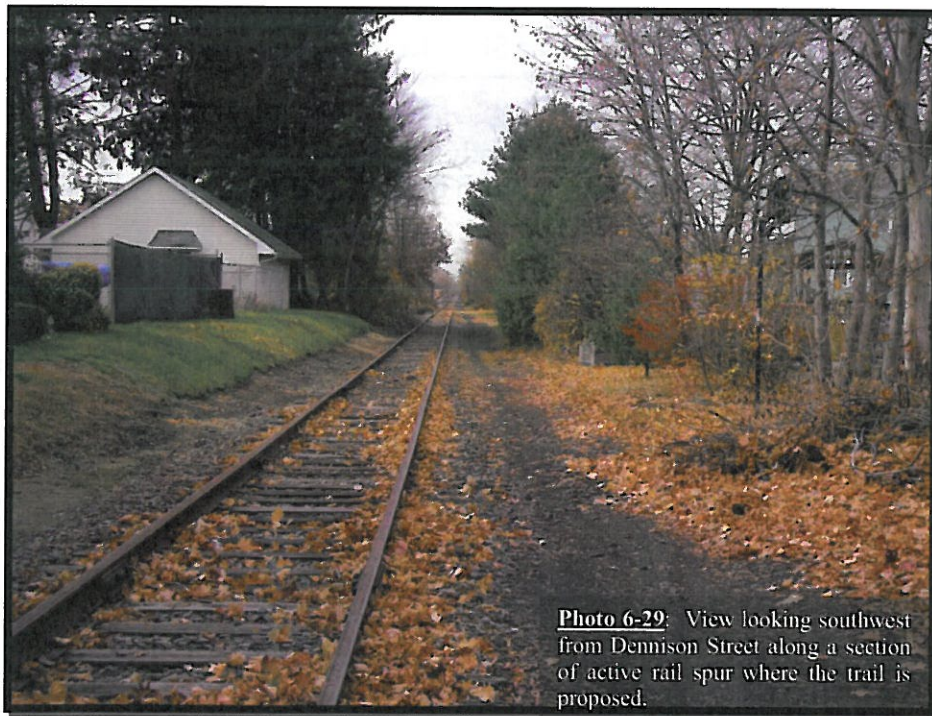
- **Restrooms**
  - Currently Available at Roosevelt Park, O'Hara Park, Luzerne County Park, Frank Slapar Field and Flack Memorial Field.
- **Water**
  - Currently Available at Roosevelt Park, O'Hara Park, Luzerne County Park, Frank Slapar Field and Flack Memorial Field.
- **Emergency Telephone**
  - Currently Available at Roosevelt Park, O'Hara Park, Luzerne County Park, Frank Slapar Field and Flack Memorial Field.
- **Lighting**
  - Pedestrian Lighting recommended at all Street Crossings
- **Parking / Trail Heads**



- Currently Available at Roosevelt Park, O'Hara Park, Luzerne County Park, Frank Slapar Field and Flack Memorial Field.
- Existing Trailhead for Luzerne County Levee Trail at Luzerne County Park.
- New Trailheads Recommended at Currently Roosevelt Park, O'Hara Park, Frank Slapar Field and Flack Memorial Field
- **Barriers and Emergency Access**
  - Balusters may be required to restrict access to trail from each of the road intersections.
  - Baluster design should provide ability for Emergency Access to trail.
  - Based upon the width of the railroad right-of-way and location of the tracks within the ROW, fencing or another type of barrier may be required between the tracks and the proposed trail. Where feasible, a vegetative barrier is preferred over man-made structures.
- **Natural Buffers and/or Screening**
  - Existing tree rows line much of the right-of-way through the residential areas to provide buffer between the houses and this active rail line. Fencing and other landscaping features have also been installed by many homeowners to screen their view of the tracks. However, depending upon the reaction of adjoining property owners, some additional screening may be required.
  - Based upon the width of the railroad right-of-way and location of the tracks within the ROW, a vegetative barrier between the tracks and the proposed trail may be feasible.

**Environmental Hazards:**

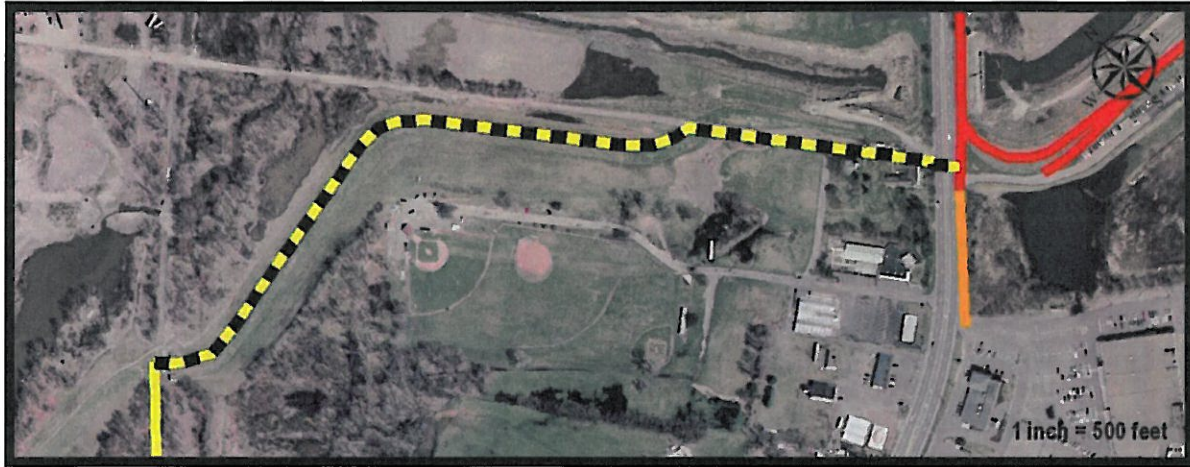
Due to the historic industrial use of this site, a Phase I Environmental Assessment of the trail corridor is recommended prior to development.



**Photo 6-29:** View looking southwest from Dennison Street along a section of active rail spur where the trail is proposed.



**Kingston Area Trail: Section V. – Flack Memorial Park to West Side Trail**



**Figure 6-9:** PAMAP Aerial Photography showing the proposed alignment for Section V of the Kingston Area Trail.

Although outside of the original project area, this segment of trail has been included in this study to provide linkage from the Kingston Area Trail to the West Side and Luzerne County Levee Trails.

The trail will leave the railroad easement and enter onto Luzerne County Flood Protection Authority property. The trail can either run along the top of the existing flood levee or along southwestern base of the levee to Charlie Flack Memorial Park. From the park, the trail will run along Swetland Land adjacent to the Swetland House. The trail will cross Wyoming Avenue (Route 11) where it will join into the West Side Trail and the Luzerne County Levee Trail.

**Distance:** 0.50 miles

**Existing Surface:** Earthen Levee and Road Shoulder

**Surrounding Land Use / Land Cover:**

The area around this section of trail is currently undeveloped. To the northeast of the trail is floodplain and Charlie Flack Memorial Park is to the southwest.

**Ownership:**

<u>Property ID</u>	<u>Owner</u>
66E10 00A0A1000	Redevelopment Authority of Luzerne County 16 Luzerne Avenue West Pittston, PA 18643-2817
67F10 00A001000	Luzerne County Flood Protection Authority 200 North River Street Wilkes Barre, Pa 18701
67F10S1 005003000 67F10S1 003029000	Wyoming Historical & Geological Society 49 S Franklin St Wilkes Barre, Pa 18701



**Proposed linkages:** Charlie Flack Memorial Park  
West Side Trail  
Luzerne County Levee Trail

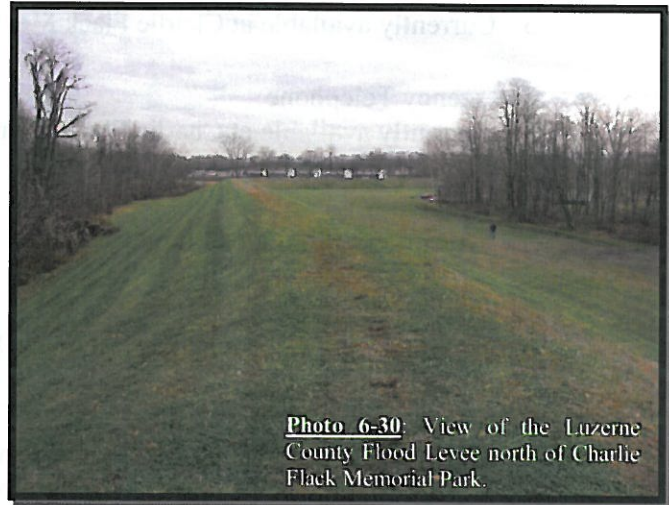
**Erosion and drainage problems:** Some wet conditions were observed along the base of the Levee.

**Structures:**

Luzerne County Flood Protection Authority Levee: Any construction on this flood control structure will require approval from the Authority and perhaps the US Corps of Engineers.

**Natural Features:**

It appears that prior to the construction of the levee, this entire area was forested wetlands. However, by protecting the area on the southwestern side of the levee, it has created some useable parkland.



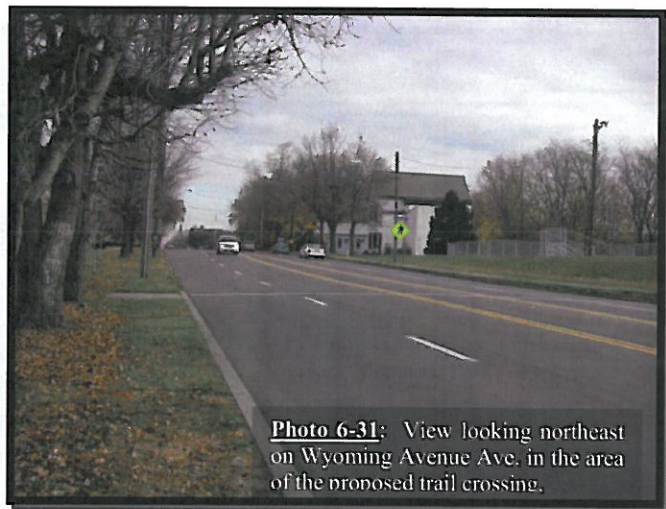
**Photo 6-30:** View of the Luzerne County Flood Levee north of Charlie Flack Memorial Park.

**Alternative Routes:**

Continue on the Railroad right of way to Swetland Lane. Follow Swetland Lane to Charlie Flack Memorial Park and onto Wyoming Avenue.

**Proposed Design:**

- Pathway Surface
  - 0.35 miles of 10' Paved Trail (*if required by LCFPA*)
  - 0.15 miles of 10' Crushed Stone Trail along Swetland Lane
- Intersections and Access Points
  - **Park Entrance Driveway**
    - Municipal Driveway
    - At grade crossing
    - Excellent sight distance
    - Low Traffic Volume
    - Delineated Crosswalk Needed
    - Signage Recommended
  - **Wyoming Avenue**
    - State Route 11
    - 4 lanes of traffic with a center turn lane
    - At grade crossing
    - Excellent sight distance
    - Heavy Traffic Volume
    - Traffic Calming / Pedestrian Safety issues
    - Cross Walk needed
    - Signage Recommended



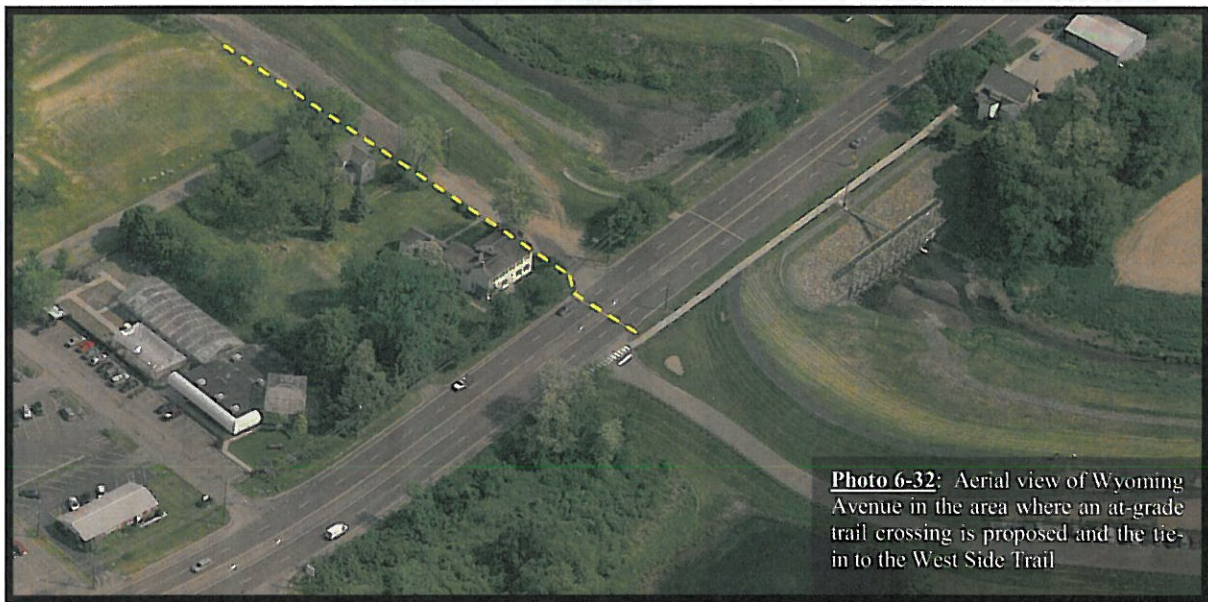
**Photo 6-31:** View looking northeast on Wyoming Avenue Ave. in the area of the proposed trail crossing.



- Auxiliary Facilities
  - Restrooms
    - Currently available at Charlie Flack Memorial Park
  - Water
    - Currently available at Charlie Flack Memorial Park.
  - Emergency Telephone
    - Currently available at Charlie Flack Memorial Park.
  - Lighting
    - Pedestrian Lighting recommended at all Street Crossings
  - Parking / Trail Heads
    - Parking is currently available at Charlie Flack Memorial Park and Levee Trailhead
  - Barriers and Emergency Access
    - Balusters may be required to restrict access to trail from Charlie Flack Memorial Park
    - Baluster design should provide ability for Emergency Access to trail.
  - Natural Buffers and/or Screening
    - None will be need on this segment of trail.

**Environmental Hazards:**

Due to the historic industrial use of this region, a Phase I Environmental Assessment of the trail corridor is recommended prior to development.



**Photo 6-32:** Aerial view of Wyoming Avenue in the area where an at-grade trail crossing is proposed and the tie-in to the West Side Trail

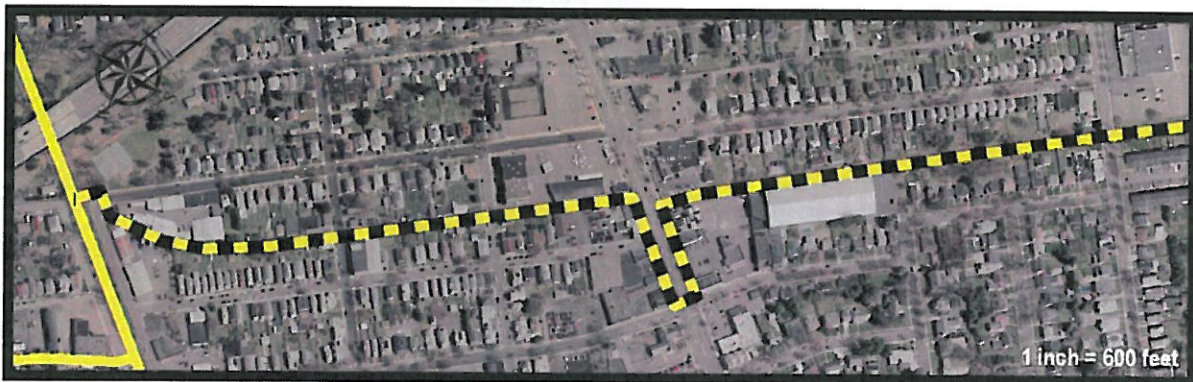


### 6.3 Back Mountain Trail Extension

The 2.14 mile Back Mountain Trail Extension will begin at Buckingham Street in Luzerne Borough and will connect into the Luzerne County Levee Trail behind the Kingston Recreation Center. This trail will intersect the Kingston Area Trail and will also provide linkage to the Luzerne County Vo-Tech School. The proposed trail route runs along an abandoned railroad grade which is currently owned by the Redevelopment Authority of Luzerne County. The preliminary route evaluation found only minimal encroachments into this right of way.



**Figure 6-10:** PAMAP Aerial Photography showing the proposed alignment for the Back Mountain Trail Extension from the end of the existing trail to the proposed Kingston Area Trail.



**Figure 6-11:** PAMAP Aerial Photography showing the proposed alignment for the Back Mountain Trail Extension from the Kingston Area Trail to Rutter Avenue.



**Figure 6-12:** PAMAP Aerial Photography showing the proposed alignment for the Back Mountain Trail Extension from Rutter Avenue to the Luzerne County Levee trail behind the Kingston Recreation Center.



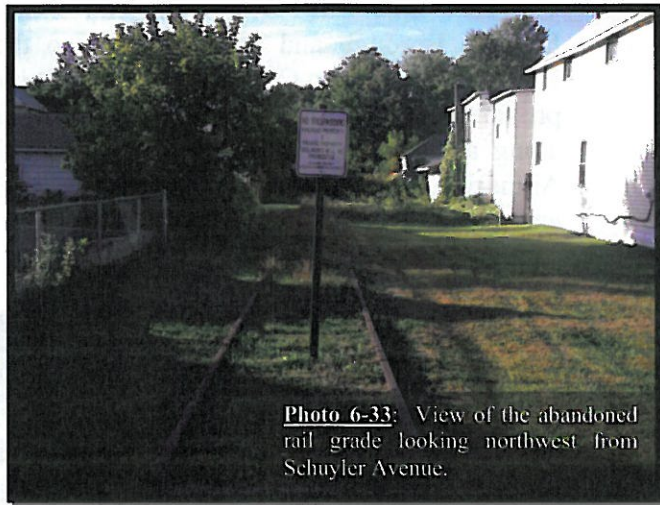
**Distance:** 2.14 miles

**Existing Surface:** Gravel & Dirt  
Abandoned Railroad ROW

**Surrounding Land Use / Land Cover:**

The area around this proposed trail alignment is predominately developed with single family residential dwellings and commercial buildings. For much of its length, the abandoned rail corridor runs behind homes and has been shielded from view by fences and hedgerows.

**Ownership:**



**Photo 6-33:** View of the abandoned rail grade looking northwest from Schuyler Avenue.

<u>Property ID</u>	<u>Owner</u>
41G9NE1 010001000	Unknown
41G9NE1 01320B000	John A Connolly Jr. Connolly Realty Company 481 Union Street Luzerne, PA 18709
41G9NE3 008003000 41G9NE3 007013000	Dallas Area Municipal Authority Box 28A Shavertown, PA 18643-2817
41G9NE3 00704B000	Charles R Heffron Jr. 215 Union Street Luzerne, PA 18709-1411
41G9NE3 007004000	James Thomas Jr & John Thomas 1 Fulton Street Luzerne, PA 18709-1411
41G9 00A0A1000 Unidentified Rail ROW	Redevelopment Authority of Luzerne County 16 Luzerne Avenue West Pittston, PA 18643-2817
34G9SE2 010022000 34G9SE2 010016000	703 Rutter Ave Partners, LLC 703 Rutter Avenue Kingston, PA 18704-4801
34G9SE2 010015000	Kevin Hogan 175 Joseph Drive Kingston, PA 18704



34G9SE2 011015000

Lathrop Street Partners  
190 Lathrop Street  
Kingston, PA 18704

34H9NW1 001001000  
34G10SW4 002013000  
34G10SW4 001007000

Kingston Borough  
500 Wyoming Avenue  
Kingston, PA 18704

34G10 00A05A000

Wilkes Barre Connecting RR Co.  
c/o Mary Beth Pitman – Suite 800  
501 Marquette Avenue  
Minneapolis, MN 55402

34G10 00A00E000

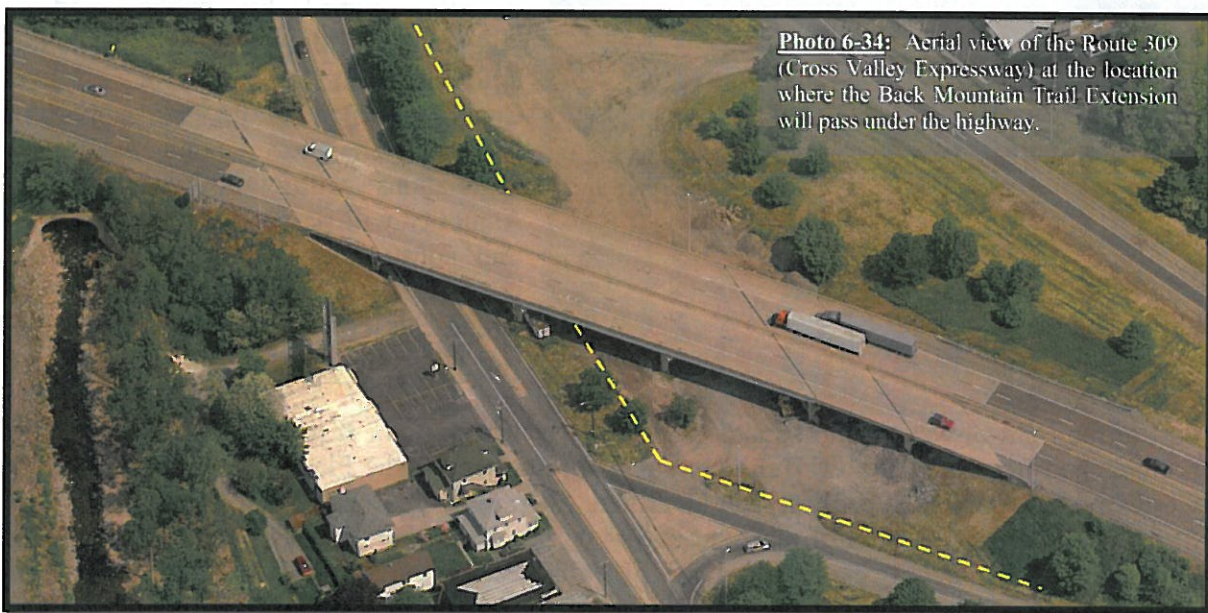
Delaware & Hudson Railway Company  
c/o Mary Beth Pitman – Suite 800  
501 Marquette Avenue  
Minneapolis, MN 55402

**Proposed linkages:** Back Mountain Trail  
West Side Vo-Tech Connector Trail  
Vaughn Street Playground  
Kingston Community Park  
Kingston Recreation Center  
Luzerne Levee Trail

**Erosion and drainage problems:** None Noted

**Structures:**

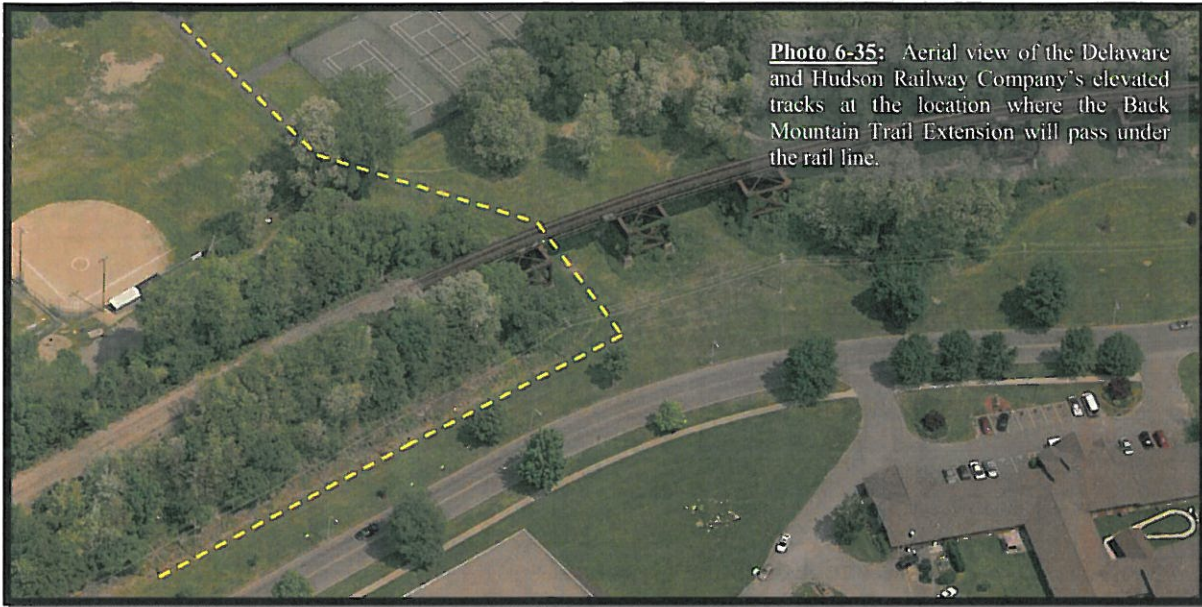
Route 309 Bridge: This PennDOT bridge carries State Route 309 over Union Street and an abandoned railroad grade. Preliminary evaluation indicated that there is sufficient room to accommodate trail passage which will be separated from Union Street by bridge supports.



**Photo 6-34:** Aerial view of the Route 309 (Cross Valley Expressway) at the location where the Back Mountain Trail Extension will pass under the highway.



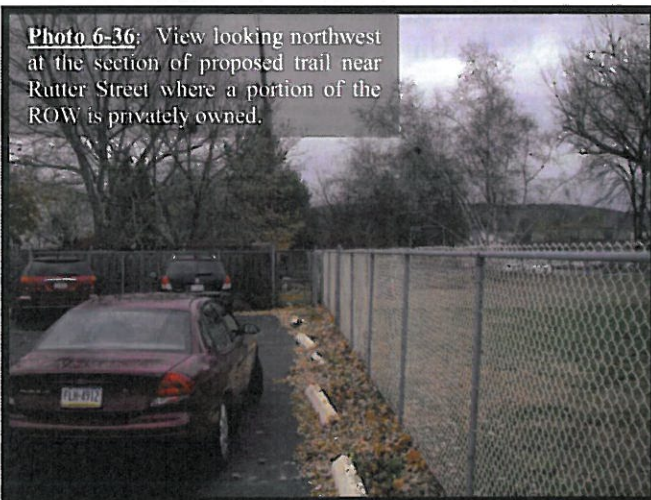
**Elevated Rail:** The proposed trail route will pass under an elevated section of Delaware and Hudson Railway Company railroad tracks. Due to its proximity to Kingston Community Park, it appears that the area under these tracks is currently maintained by Kingston Borough.



**Photo 6-35:** Aerial view of the Delaware and Hudson Railway Company's elevated tracks at the location where the Back Mountain Trail Extension will pass under the rail line.

#### **Natural Features:**

The area around this proposed trail alignment is predominately developed with single family residential dwellings. For much of its length, the abandoned rail corridor runs behind homes and has been shielded from view by fences and hedgerows. No significant natural features have been identified within the trail corridor.



**Photo 6-36:** View looking northwest at the section of proposed trail near Rutter Street where a portion of the ROW is privately owned.

#### **Alternative Routes:**

The majority of this trail corridor is currently owned by public entities. Preliminary discussions with the Redevelopment Authority of Luzerne County indicated that they are supportive of trails in the region. Additional negotiations with the Redevelopment Authority will be necessary to authorize trail construction within their right-of-way. Two areas of potential concern exist within this corridor where the right-of-way is privately owned.

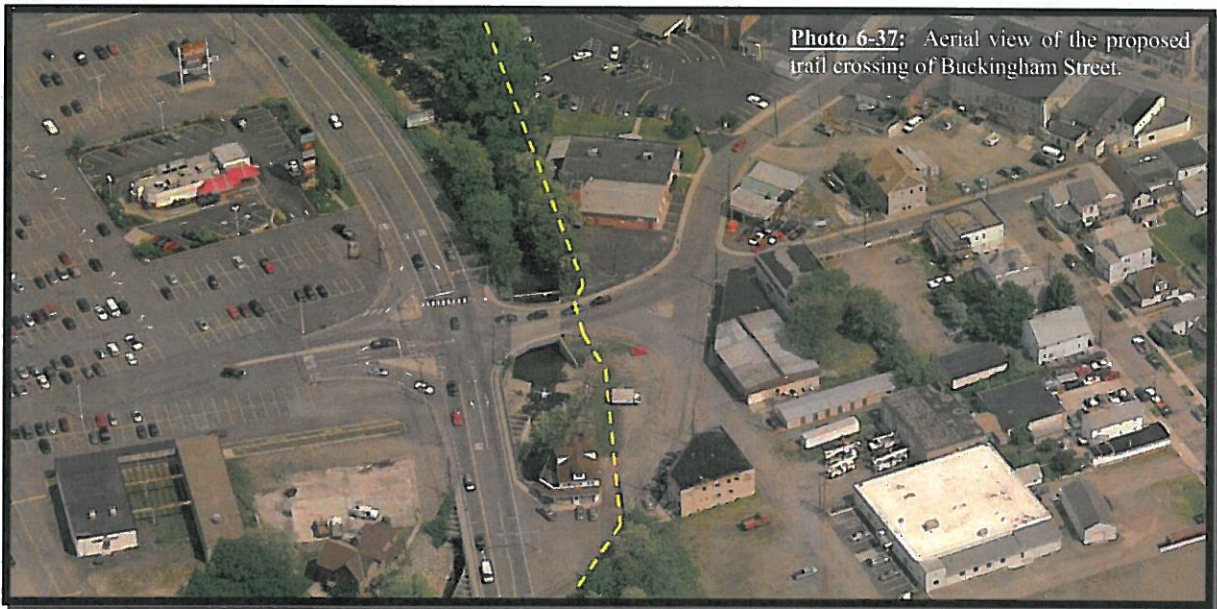
Part of the right-of-way north of Fulton Street is privately owned. If permission for the trail is not obtained from the land owners, an alternative route around the Flood Control Basin on the western side of Union Street has been identified. A second area of concern is south of Rutter Street where a short section of the right-of-way is privately owned. Two potential alternative routes have been identified if that section of trail becomes unfeasible. The first is to follow Rutter Avenue east to reach the Levee Trail. The second option would be to travel west on Rutter



Avenue to Lathrop Court. A pedestrian link to Lathrop Street would then be needed to extend the trail south towards Kingston Community Park. If possible, the trail could reconnect with the railroad ROW somewhere along Lathrop Street.

**Proposed Design:**

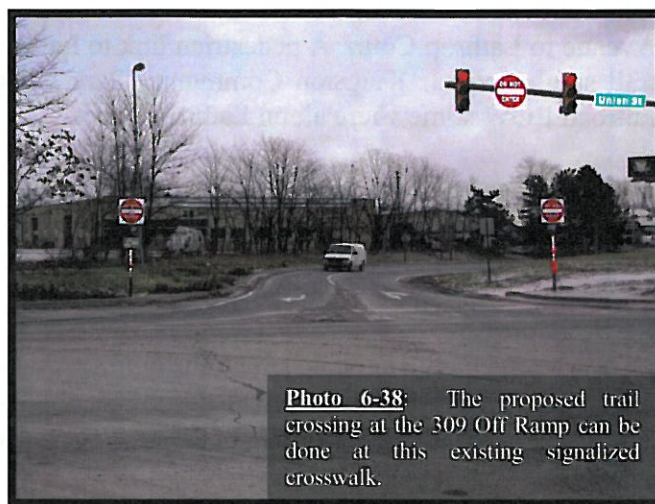
- Pathway Surface
  - 2.14 miles of 10' Crushed Stone Trail
- Structures
  - No repairs to existing structures will be needed for this segment of trail.
  - A pedestrian crossing over the Redevelopment Authority of Luzerne's rail spur will be required adjacent to Vaughn Street Playground.
- Intersections and Access Points
  - **Buckingham Street**
    - Municipal Road
    - At Grade Crossing
    - Adjacent To Signalized Intersection
    - Adjacent To Bridge Over Toby Creek
    - Fair Sight Distance
    - Moderate Traffic Volume
    - Delineated Crosswalk Needed
    - Signage Recommended



**Photo 6-37:** Aerial view of the proposed trail crossing of Buckingham Street.



- **Route 309 Off Ramp**
  - State Route 0309
  - At Grade Crossing
  - Signalized Intersection
  - Excellent Sight Distance
  - Moderate Traffic Volume
  - Crosswalk Up-Grade Needed
  - Signage Recommended



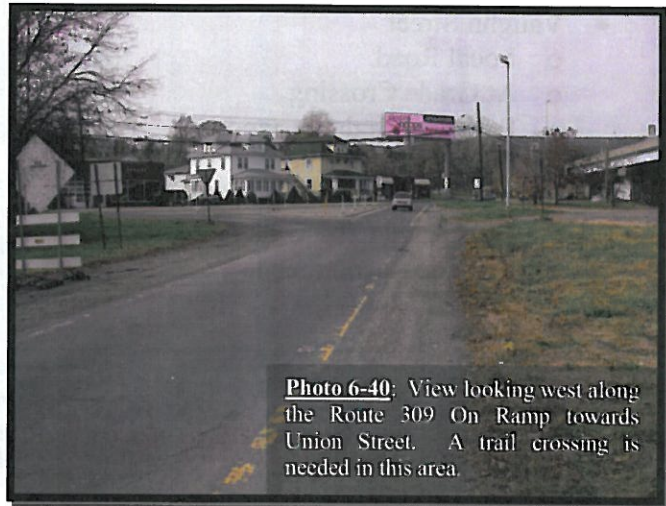
**Photo 6-38:** The proposed trail crossing at the 309 Off Ramp can be done at this existing signalized crosswalk.



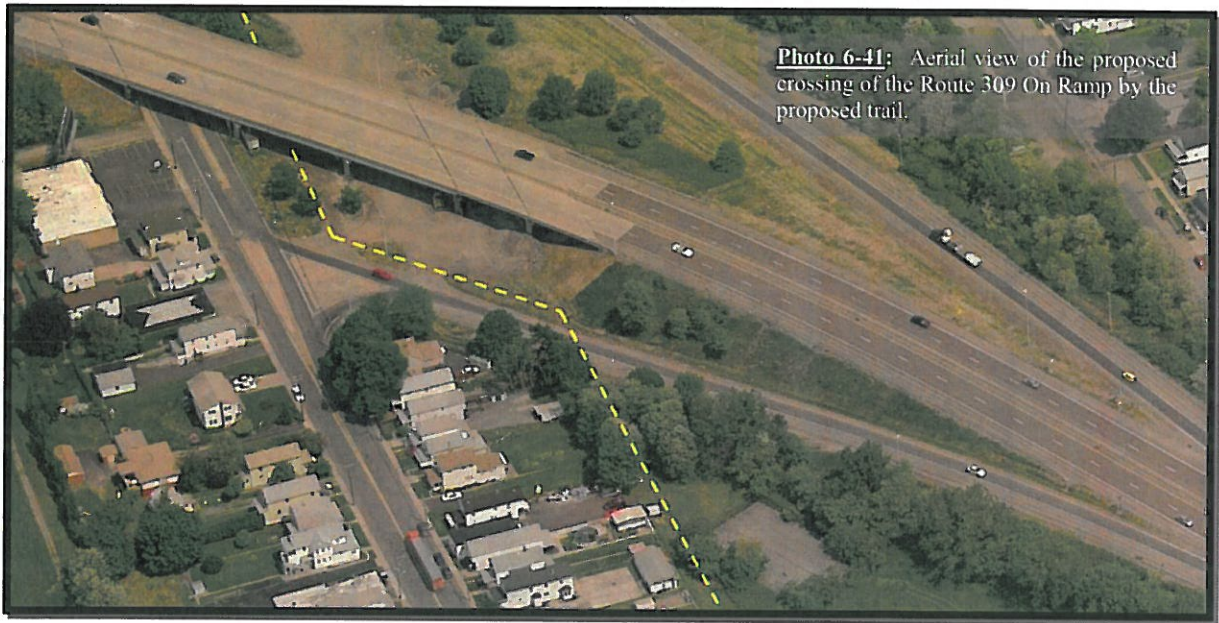
**Photo 6-39:** Aerial view of the existing signalized crosswalk at the intersection of the 309 Off Ramp and Union Street.



- **Route 309 On Ramp**
  - State Route 0309
  - At Grade Crossing
  - One Way Traffic
  - Excellent Sight Distance
  - Moderate Traffic Volume
  - Crosswalk Needed
  - Signage Recommended



**Photo 6-40:** View looking west along the Route 309 On Ramp towards Union Street. A trail crossing is needed in this area.



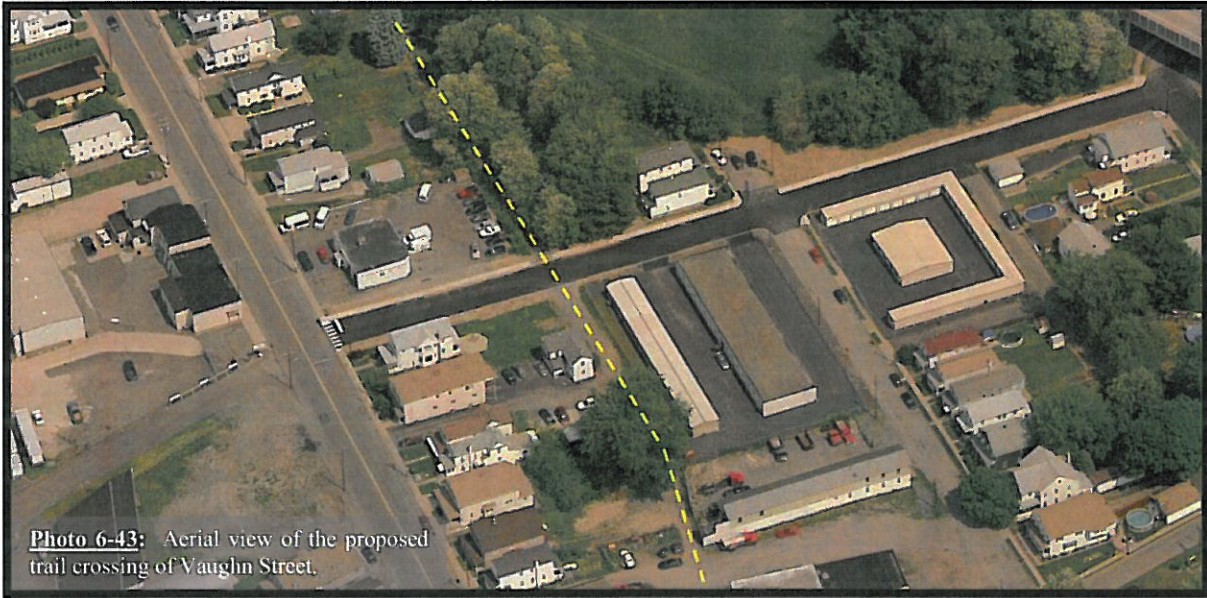
**Photo 6-41:** Aerial view of the proposed crossing of the Route 309 On Ramp by the proposed trail.



- Vaughn Street
  - Local Road
  - At Grade Crossing
  - Excellent Sight Distance
  - Low Traffic Volume
  - Mid-Block Crossing Proposed
  - Delineated Crosswalk Needed
  - Signage Recommended



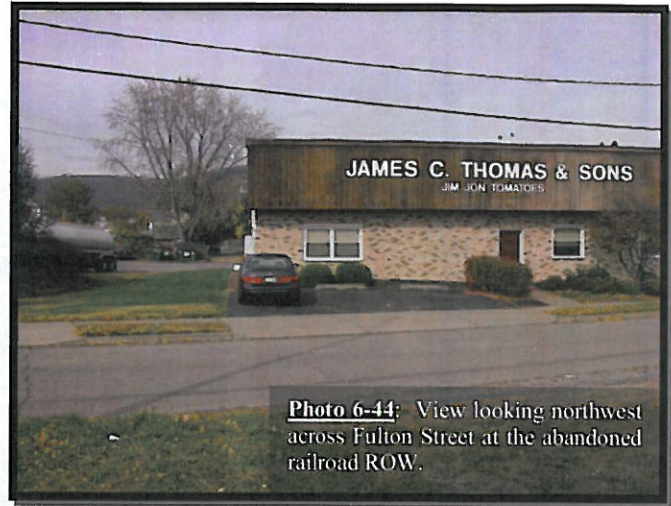
**Photo 6-42:** View looking northeast from Union Street down Vaughn Street. The proposed trail crossing will be mid-block.



**Photo 6-43:** Aerial view of the proposed trail crossing of Vaughn Street.



- **Fulton Street**
  - Municipal Street
  - At Grade Crossing
  - Excellent Sight Distance
  - Low Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended



**Photo 6-44:** View looking northwest across Fulton Street at the abandoned railroad ROW.

- **Railroad Avenue**
  - Municipal Street
  - Adjacent to Vaughn St. Playground
  - At Grade Crossing
  - Moderate Sight Distance
  - Low Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended



**Photo 6-45:** View of Vaughn Street Playground which will be accessible from the proposed trail system.



**Photo 6-46:** Aerial view of proposed trail crossings of Fulton Street and Railroad Avenue. Also shown is the proposed connection to the Kingston Area Trail (in red).





**Photo 6-47:** View looking northwest across Mercer Avenue at the abandoned railroad ROW.

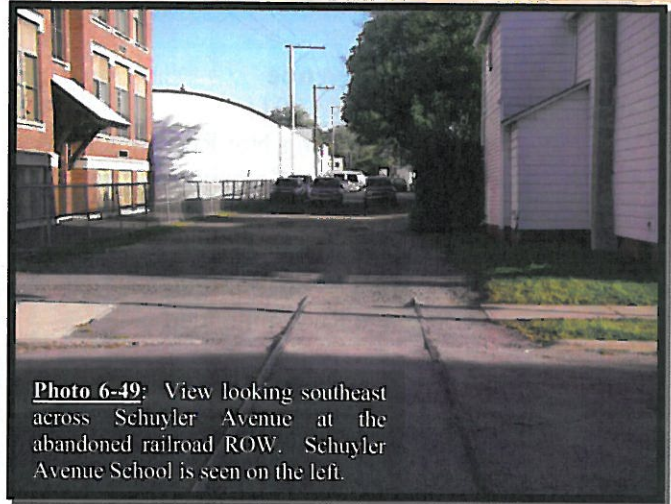
- **Mercer Avenue**
  - Municipal Street
  - At Grade Crossing
  - Excellent Sight Distance
  - Low Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended



**Photo 6-48:** Aerial view of the proposed trail crossing of Mercer Avenue.



- **Schuyler Avenue**
  - Municipal Street
  - At Grade Crossing
  - Adjacent to Schuyler Ave School
  - Excellent Sight Distance
  - Low Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended



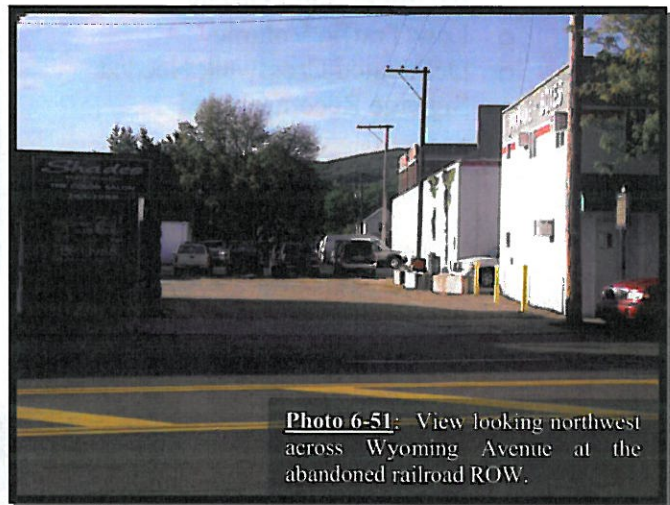
**Photo 6-49:** View looking southeast across Schuyler Avenue at the abandoned railroad ROW. Schuyler Avenue School is seen on the left.



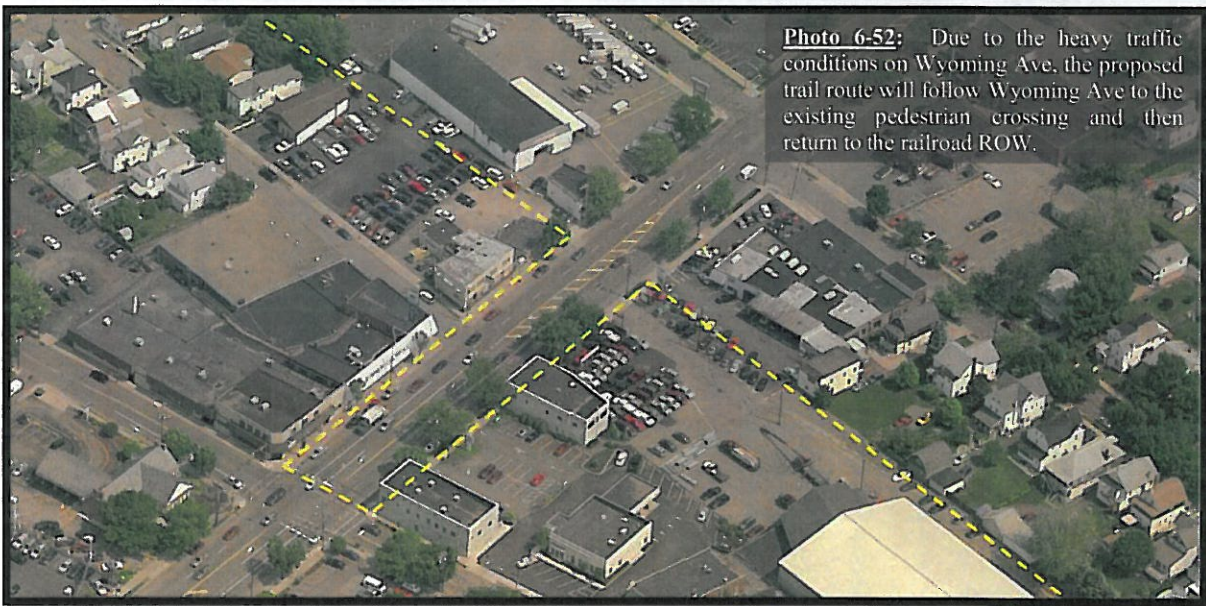
**Photo 6-50:** Aerial view of the Schuyler Avenue School and the proposed trail route.



- **Wyoming Avenue**
  - State Route 0011
  - New Crossing Not Recommended
  - Use Existing Crossing At Union St.
  - Existing Signalized Crosswalk
  - Excellent Sight Distance
  - Heavy Traffic Volume
  - Signage Recommended
- **John Street**
  - Municipal Street
  - At Grade Crossing
  - Excellent sight distance
  - Moderate Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended



**Photo 6-51:** View looking northwest across Wyoming Avenue at the abandoned railroad ROW.



**Photo 6-52:** Due to the heavy traffic conditions on Wyoming Ave, the proposed trail route will follow Wyoming Ave to the existing pedestrian crossing and then return to the railroad ROW.



- **Rutter Avenue**
  - State Route K052
  - At Grade Crossing
  - Excellent Sight Distance
  - Moderate Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended



**Photo 6-53:** View looking northwest from Rutter Avenue at the abandoned railroad ROW.

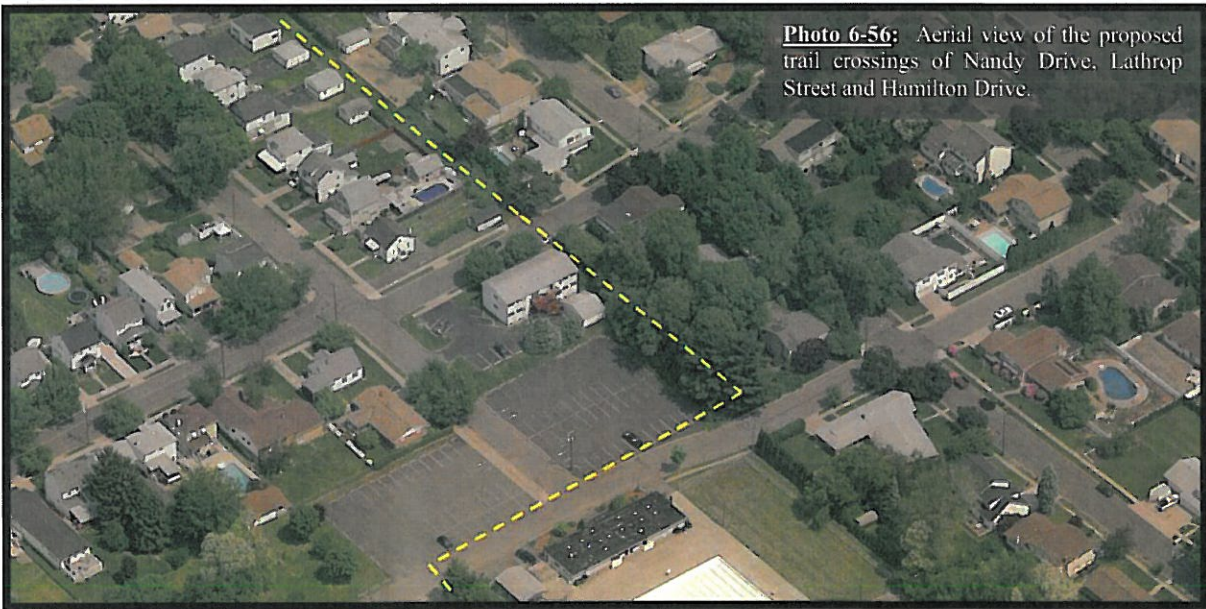
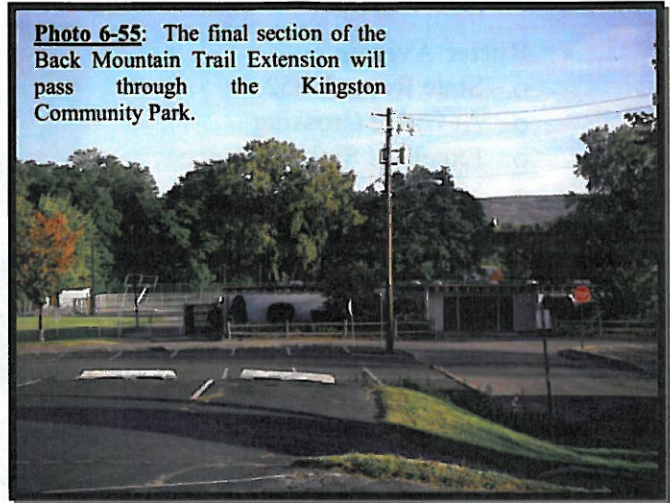


**Photo 6-54:** Aerial view of the proposed Rutter Avenue crossing. Southeast of Rutter Avenue is a section of ROW which is privately owned. An alternative route may be needed for this section of trail.



- **Nandy Drive**
  - Municipal Street
  - At Grade Crossing
  - Excellent Sight Distance
  - Low Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended
- **Lathrop Street**
  - Municipal Street
  - At Grade Crossing
  - Intersection with STOP Sign
  - Excellent Sight Distance
  - Low Traffic Volume
  - Crosswalk Improvements Needed
  - Signage Recommended
- **Hamilton Drive**
  - Municipal Street
  - At Grade Crossing
  - Excellent Sight Distance
  - Adjacent to Kingston Community Park
  - Low Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended

**Photo 6-55:** The final section of the Back Mountain Trail Extension will pass through the Kingston Community Park.

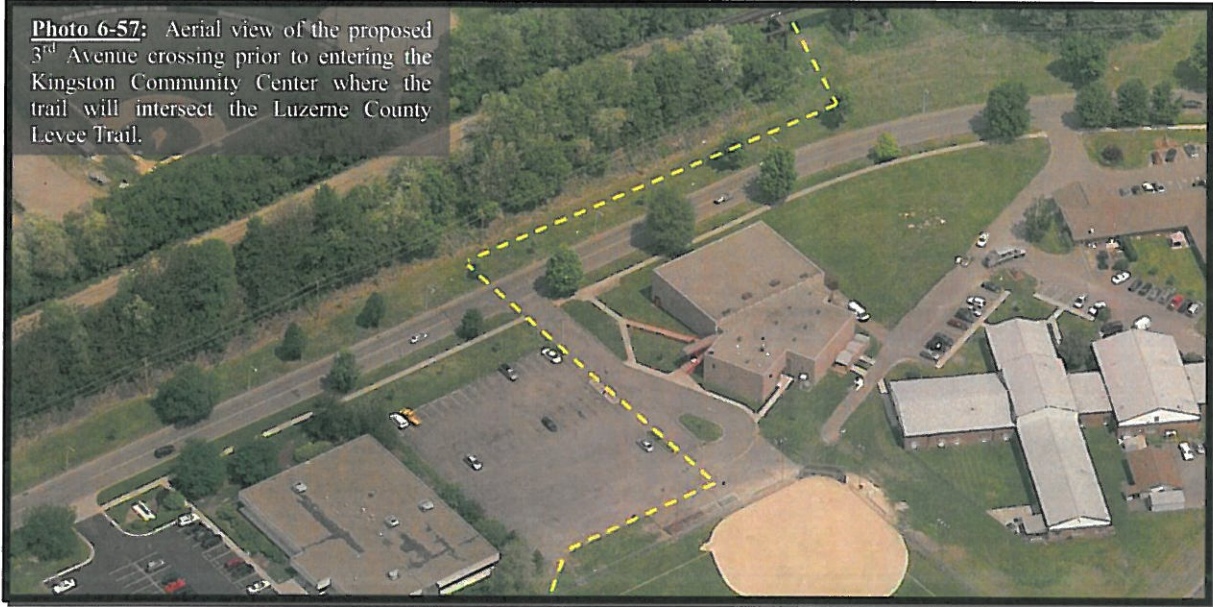


**Photo 6-56:** Aerial view of the proposed trail crossings of Nandy Drive, Lathrop Street and Hamilton Drive.



- **3<sup>rd</sup> Avenue**
  - State Route K056
  - At Grade Crossing
  - Adjacent to Kingston Recreation Center
  - Excellent Sight Distance
  - Moderate Traffic Volume
  - Delineated Crosswalk Needed
  - Signage Recommended

**Photo 6-57:** Aerial view of the proposed 3<sup>rd</sup> Avenue crossing prior to entering the Kingston Community Center where the trail will intersect the Luzerne County Levee Trail.



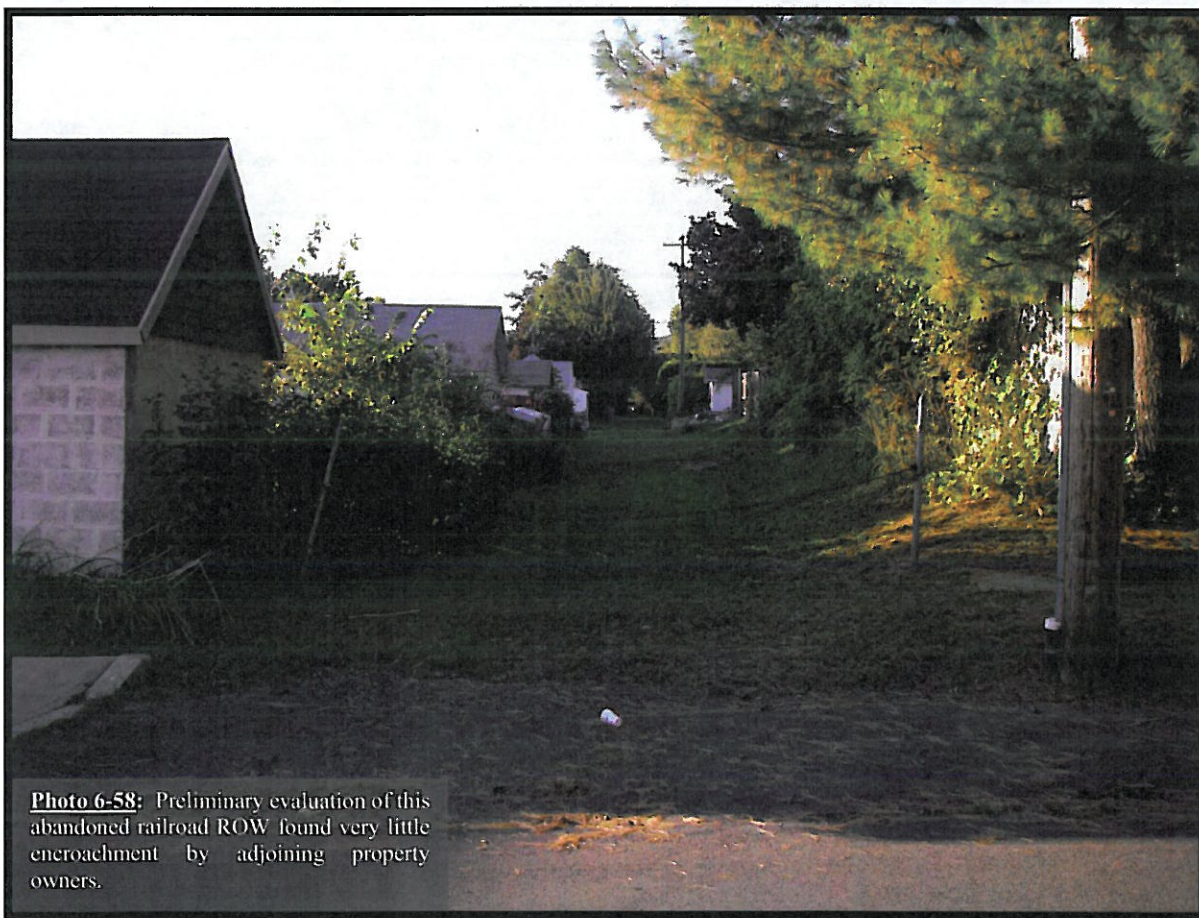
- **Auxiliary Facilities**
  - **Restrooms**
    - Currently available at Kingston Community Park and Kingston Recreation Center.
  - **Water**
    - Currently available at Kingston Community Park and Kingston Recreation Center.
  - **Emergency Telephone**
    - Currently available at Kingston Community Park and Kingston Recreation Center.
  - **Lighting**
    - Pedestrian Lighting recommended at all Street Crossings.
  - **Parking / Trail Heads**
    - Parking is currently available at Kingston Community Park and Kingston Recreation Center.
    - Existing Trailhead located at Kingston Recreation Center.
    - New Trailheads Recommended at Kingston Community Park.
  - **Barriers and Emergency Access**
    - Balusters may be required to restrict access to trail from each road crossing.
    - Baluster design should provide ability for Emergency Access to trail.



- Natural Buffers and/or Screening
  - Fencing and other landscaping features have also been installed by many homeowners to screen their view of the abandoned right-of-way. However, depending upon the reaction of adjoining property owners, some additional screening may be required.

**Environmental Hazards:**

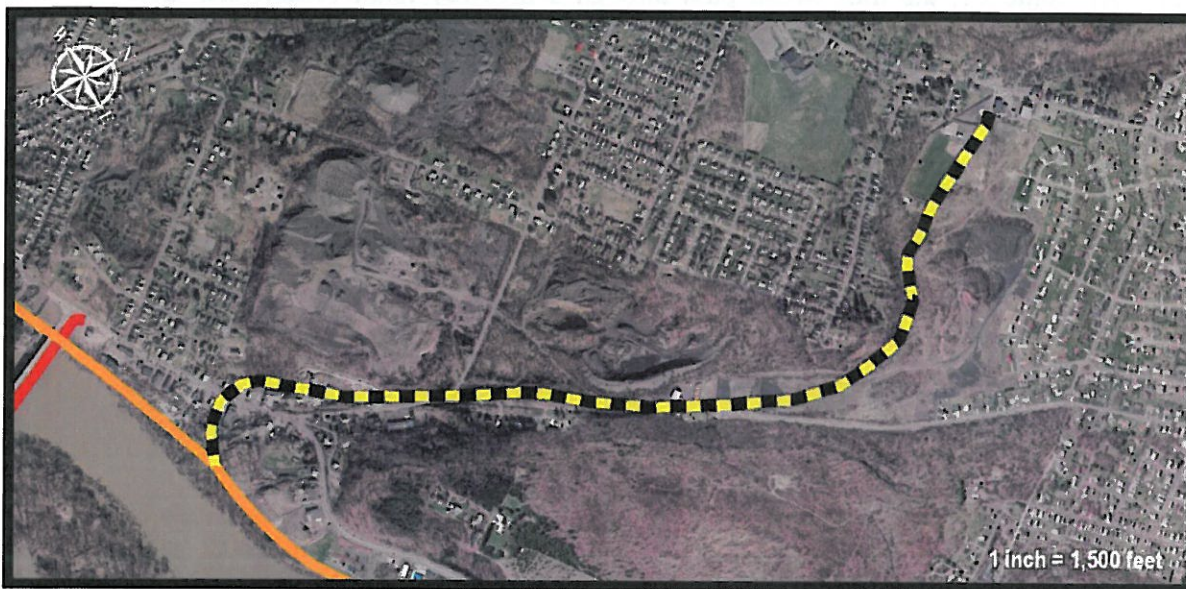
Due to the historic industrial use of this area, a Phase I Environmental Assessment of the trail right of way is recommended prior to development.



**Photo 6-58:** Preliminary evaluation of this abandoned railroad ROW found very little encroachment by adjoining property owners.



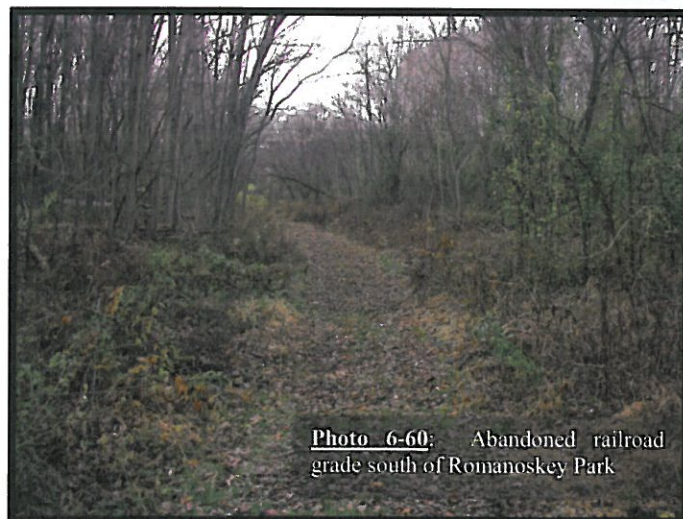
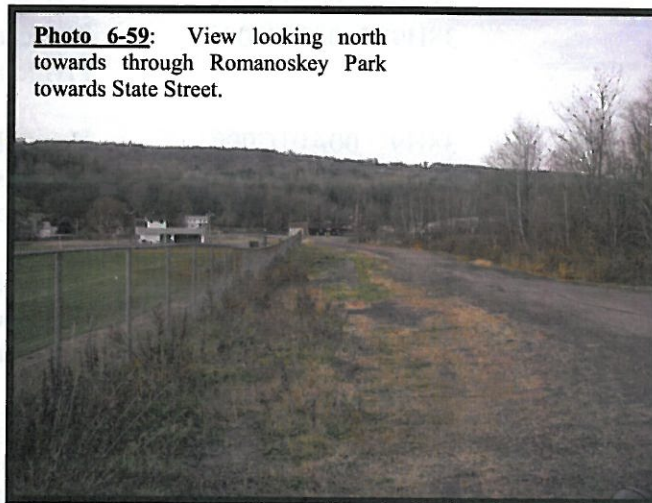
## 6.4 Larksville Connector Trail



**Figure 6-13:** PAMAP Aerial Photography showing the proposed alignment for the Larksville Connector Trail from Romanoskey Park in Larksville to the Susquehanna Warrior Trail on the southern side of Route 11.

This 1.6 mile trail would connect Romanoskey Park in Larksville to the Susquehanna Warrior Trail, thus providing this neighborhood access to the regional trail system. The trail route is proposed along an abandoned railroad grade thru mine scarred land. Issues which will need to be addressed before this trail becomes a reality include property ownership, safe crossing of Route 11, an existing junk yard and the completion of the Susquehanna Warrior Trail.

**Photo 6-59:** View looking north towards through Romanoskey Park towards State Street.



**Photo 6-60:** Abandoned railroad grade south of Romanoskey Park

**Distance:** 1.6 miles

**Existing Surface:** Dirt, Gravel & Rail Ballast

### **Surrounding Land Use / Land Cover:**

The trail is proposed on an abandoned rail grade which is surrounded by mine scarred land. Much of the proposed trail corridor has become overgrown by shrub / scrub vegetation. An existing Sanitary Sewer line also runs along the old rail grade. The southern half of the route of the alignment runs parallel to East Main Street. After crossing Nesbitt Street, the trail alignment



runs behind the Shawnee Concrete & Asphalt plant before it turns southeast and crosses Route 11. At Route 11, the trail would pass through a highway retail commercial area. The final section of trail runs through an area which is currently used as an Auto Salvage Yard.

**Ownership:**

<u>Property ID</u>	<u>Owner</u>
38G9S4A 005025000	Larksville Boro Town Hall 1 East First St Larksville, PA 18704
38H9 00A017000	Scenic Development Corp 559 E Northampton St Wilkes Barre, PA 18702-6145
38H9S2 002003000	Justin P Curcio 229 Cannery Drive Larksville, PA 18704
38H9S2 002001000 38H9S2 002002000	T & M Transit Inc 95 Academy St Plymouth, PA 18651-2101
38H9 00A01C000 38H9 00A01E000	Heavy Media Inc 200 Front St Nanticoke, PA 18634-4322
38H8S5 00405B000	Shawnee Ready Mix Concrete Co 715 E Main St Plymouth, PA 18651-3205
38H8S5 004005000	Robert J & Kathleen M Kachinko 27 Elm St Plymouth, PA 18651-2411
38H8S5 004003000 38H8S5 00402B000 38H8S5 00405D000	Plymouth Property Real Estate, LLC 330 N Boulevard Clark Summit, PA 18411
38H8S5 00402A000 38H8S5 00402C000	Glen Carbonic Gas Co 665 E Main St Plymouth, PA 18651-3203
38H8S5 004002000	Michael M Duda et al 665 E Main St Larksville, PA 18651-3203



38H8S5 00601A000

John & Anna Lech  
450 W Shawnee Ave  
Plymouth, PA 18651-2007

38H8 00A00A000

D & H Railway Corp  
501 Marquette Ave  
Minneapolis, MN 55402-1201

**Proposed linkages:** Romanoskey Park  
Susquehanna Warrior Trail

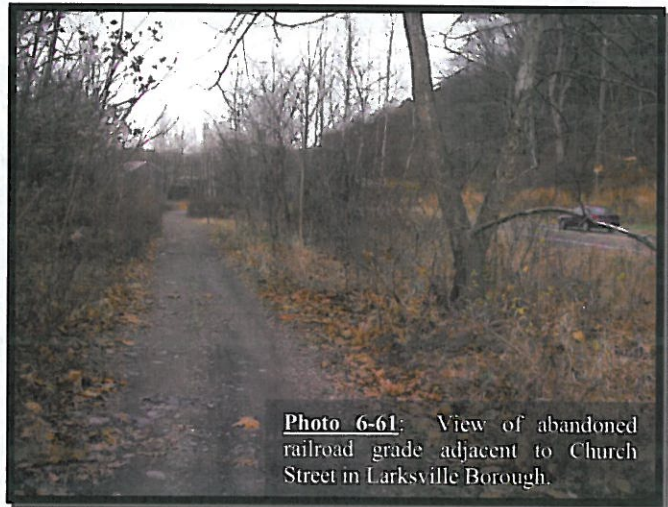
**Erosion and drainage problems:** None Noted

**Structures:**

There are no existing structures associated with this proposed section of trail.

**Natural Features:**

As previously discussed, this proposed section of trail passes through an area which has been significantly disturbed by previous mining operations. However, secondary growth has begun in much of the area and deciduous shrub and scrub species are reclaiming the area. An unnamed tributary of the Susquehanna River begins near the intersection of East Main Street and Nesbitt Street and then runs adjacent to E. Main St. Depending upon the final alignment of the trail, a crossing of this small stream may be necessary.



**Photo 6-61:** View of abandoned railroad grade adjacent to Church Street in Larksville Borough.

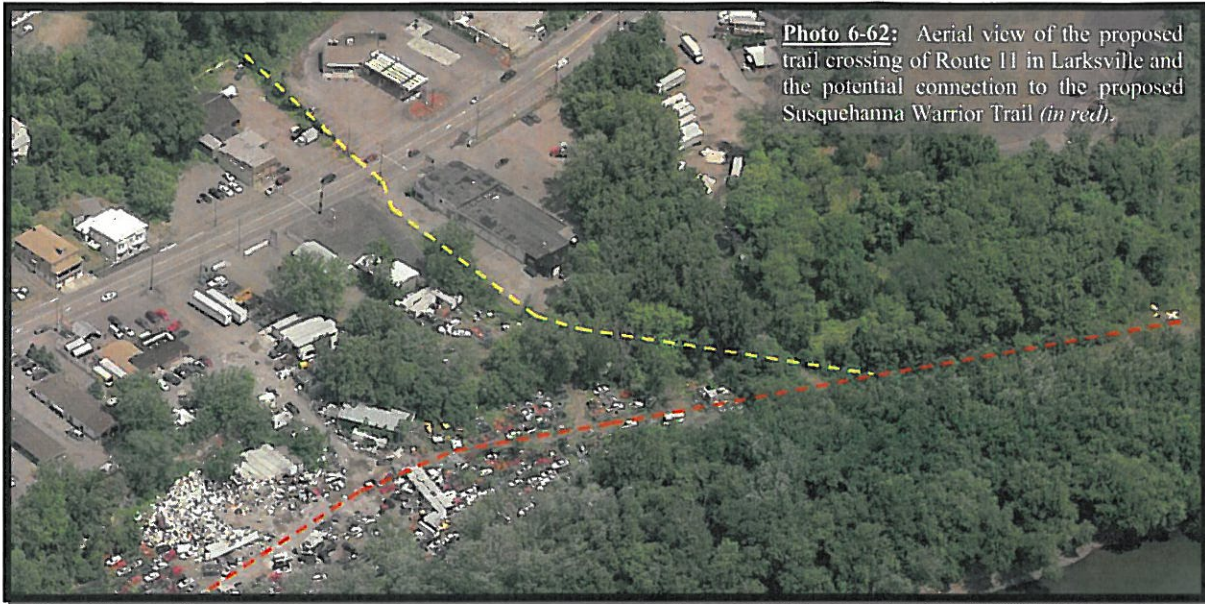
**Alternative Routes:**

An alternative to the proposed route would be to cross East Main Street and proceed eastward through a steeply sloped, forested area to the end of the proposed Kingston Area Trail. Although this section of trail would be rugged, it would provide access to an undeveloped tract of land owned by the West Wyoming School District and would not require the completion of the Susquehanna Warrior Trail.

**Proposed Design:**

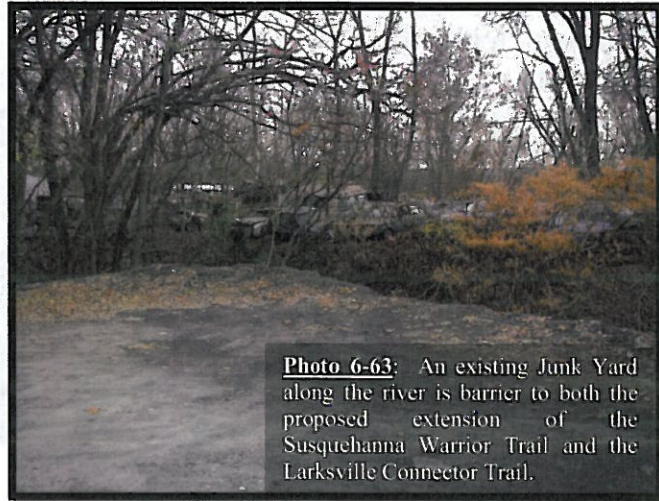
- Pathway Surface
  - 1.6 miles of 10' Crushed Stone Trail
- Structures
  - Depending upon the final alignment of the trail, a crossing of the small stream adjacent to the intersection of East Main Street and Nesbitt Street may be necessary.





**Photo 6-62:** Aerial view of the proposed trail crossing of Route 11 in Larksville and the potential connection to the proposed Susquehanna Warrior Trail (in red).

- Intersections and Access Points
  - **Nesbitt Street**
    - Municipal Road
    - At Grade Crossing
    - Moderate Sight Distance
    - Moderate Traffic Volume
    - Delineated Crosswalk Needed
    - Signage Recommended
  - **Route 11**
    - State Route 11
    - At Grade Crossing
    - Moderate Sight Distance
    - High Traffic Volume
    - Delineated Crosswalk Needed
    - Traffic Calming Measures Required
    - Signage Recommended
- Auxiliary Facilities
  - Restrooms
    - Currently available at Romanoskey Park / Larksville Municipal Building.
  - Water
    - Currently available at Romanoskey Park / Larksville Municipal Building.
  - Emergency Telephone
    - Currently available at Romanoskey Park / Larksville Municipal Building.
  - Lighting
    - Pedestrian Lighting recommended at all Street Crossings.



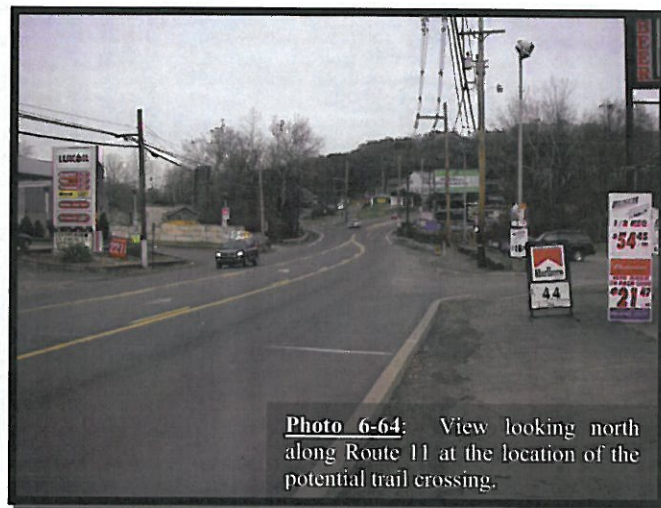
**Photo 6-63:** An existing Junk Yard along the river is barrier to both the proposed extension of the Susquehanna Warrior Trail and the Larksville Connector Trail.



- Parking / Trail Heads
  - Parking is currently available at Romanoskey Park / Larksville Municipal Building.
  - New Trailheads Recommended at Romanoskey Park.

- Barriers and Emergency Access
  - Balusters may be required to restrict access to trail from each road crossing.
  - Baluster design should provide ability for Emergency Access to trail.

- Natural Buffers and/or Screening
  - Due to the nature of this section of trail corridor, no buffers and/or screening is required. However, supplemental planting along the trail would be beneficial.



**Photo 6-64:** View looking north along Route 11 at the location of the potential trail crossing.

#### **Environmental Hazards:**

Due to the historic industrial use of this region, a Phase I Environmental Assessment of the trail corridor is recommended prior to development.



**Photo 6-65:** View looking north along a section of the abandoned railroad grade.



## 6.5 Market Street Connector Trail



**Figure 6-14:** PAMAP Aerial Photography showing the proposed alignment for the Market Street Connector Trail from the Market Street Bridge to the proposed Kingston Area Trail.

This connector trail would utilize the existing sidewalks and roadway to bring people from Five Corners section of Kingston and the Market Street Bridge to the Kingston Area Trail. This route will also provide students from the Wyoming Seminary access to the regional trail system.

**Distance:** 1.24 miles

**Existing Surface:** Existing Concrete Sidewalk and Asphalt Roadway

### **Surrounding Land Use / Land Cover:**

Land use along Market Street, north of Five Corners is divided into three districts. A retail / commercial district surround the intersection of Market Street and Route 11. From Sprague Avenue to Chestnut Avenue, institutional uses dominate the streetscape. Wyoming Seminary and two churches line the street. From Chestnut Avenue to Schuyler Avenue, the area is predominately residential. Along this section of the street are numerous single family dwellings and a public house complex.



**Photo 6-66:** View looking southeast along Market Street past the Campus of Wyoming Seminary.



**Ownership:**

<u>Property ID</u>	<u>Owner</u>
34G9SE4 01402B000	Brian J Price & Kelly A Martinez 201 Schuyler Ave Kingston, PA 18704
34G9SE4 01423E000	David A Kovalchick 240 Schuyler Ave Kingston, PA 18704

**Proposed linkages:** Five Corners section of Kingston  
Wyoming Seminary

**Erosion and drainage problems:** None Noted

**Structures:**

There are no existing structures associated with this proposed section of trail.

**Natural Features:**

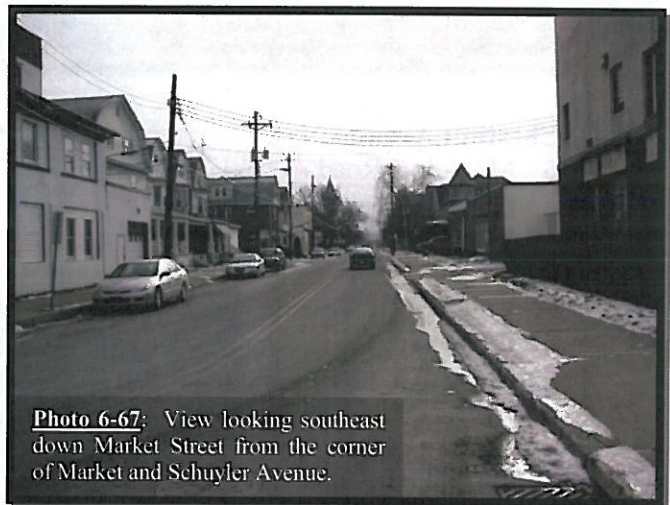
This section of proposed trail is located in a urban setting. Several mature shade trees line the street in front of Wyoming Seminary.

**Alternative Routes:**

Most of this route will utilize existing sidewalks and roadway within public right of ways. At the end of Market Street, the trail will cross a privately owned parcel to connect into the proposed Kingston Area Trail. If access through this private property is not granted, the trail could turn onto Schuyler Avenue until a point where access to the trail is obtained.

**Proposed Design:**

- Pathway Surface
  - 0.35 miles of improved sidewalk
  - 20 feet of 10' Crushed Stone Trail
- Structures
  - None required.
- Intersections and Access Points
  - **Sprague Avenue**
    - Municipal Road
    - One Way Traffic
    - At Grade Crossing
    - Good Sight Distance
    - Low Traffic Volume
    - Crosswalk Improvements Needed
    - Signage Recommended



**Photo 6-67:** View looking southeast down Market Street from the corner of Market and Schuyler Avenue.



- **Maple Avenue**
  - Municipal Road
  - One Way Traffic
  - At Grade Crossing
  - Good Sight Distance
  - Low Traffic Volume
  - Crosswalk Improvements Needed
  - Signage Recommended



**Photo 6-68:** Aerial view of the proposed trail intersections at Sprague and Maple Avenues.

- **Chestnut Avenue**
  - Municipal Road
  - One Way Traffic
  - At Grade Crossing
  - Good Sight Distance
  - Low Traffic Volume
  - Crosswalk Improvements Needed
  - Signage Recommended
- **Schuyler Avenue**
  - Municipal Road
  - At Grade Crossing
  - Good Sight Distance
  - Low Traffic Volume
  - Crosswalk Improvements Needed
  - Signage Recommended



**Photo 6-69:** View looking northwest from the end of Market Street at the proposed connection to the Kingston Area Trail.





**Photo 6-70:** Aerial view of the proposed trail intersections at Chestnut and Schuyler Avenues and the connection into the Kingston Area Trail (in red).

- Auxiliary Facilities
  - Restrooms
    - None Available or Proposed on this Segment of Trail.
  - Water
    - None Available or Proposed on this Segment of Trail.
  - Emergency Telephone
    - None Available or Proposed on this Segment of Trail.
  - Lighting
    - Pedestrian Lighting recommended at all Street Crossings.
  - Parking / Trail Heads
    - On-Street Parking Available
    - No New Trailheads Recommended for this Segment of Trail.
  - Barriers and Emergency Access
    - Balusters may be required to restrict access to Kingston Area Trail.
    - Baluster design should provide ability for Emergency Access to trail.
  - Natural Buffers and/or Screening
    - Due to the nature of this section of trail corridor, no buffers and/or screening is required. However, supplemental planting along the trail would be beneficial.

**Environmental Hazards:**

Due to the historic industrial use of this region, a Phase I Environmental Assessment of area around the connection to the Kingston Area Trail is recommended.



## 6.6 Hopkins Memorial Park Connector Trail



**Figure 6-15:** PAMAP Aerial Photography showing the proposed alignment for the Hopkins Memorial Park Connector Trail from the park in Edwardsville to the proposed Kingston Area Trail.

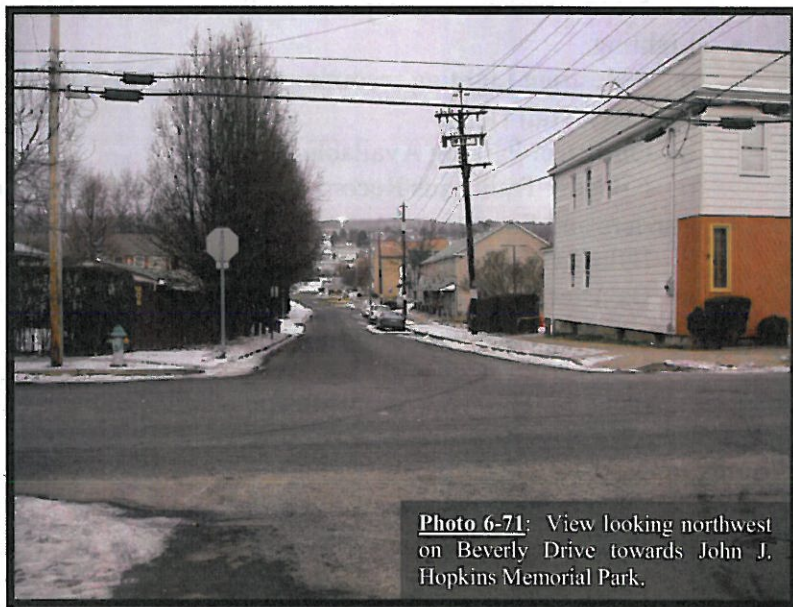
This connector trail would begin at the parking area in John J. Hopkins Memorial Park in Edwardsville Borough. It will run across the park and down Beverly Drive and Lawrence Street to connect into the Kingston Area Trail. A crushed stone trail is proposed through the park with existing sidewalk and roadway used along Beverly Drive and Lawrence Street. At the end of Lawrence Street, the trail will follow the easement for the Toby Creek tunnel. This section of trail will once again be crushed stone until its connection into the Kingston Area Trail.

**Distance:** 0.50 miles

**Existing Surface:** Existing Concrete Sidewalk, Asphalt Roadway and Gravel

### Surrounding Land Use / Land Cover:

Located near the center of Edwardsville, John J. Hopkins Memorial Park is surrounded by a variety of development types. To the north of the park is an apartment complex, the downtown district is located to the south and west and a residential area is located on the eastern side of the park. The proposed trail route will run along Beverly Drive and Lawrence Street, through the residential district to connect into the Kingston Area Trail.





**Ownership:**

<u>Property ID</u>	<u>Owner</u>
Unidentified Property at end of Lawrence Street	UNKNOWN (Believed to be Luzerne FPA)
34G9SE4 00123D000	Brian and July Selenski 47 Druid Hills Drive Shavertown, PA 18708
34G9SE4 00123B000	Square Deal Realty, Inc. 158 Pringle Street Kingston, PA 18704

**Proposed linkages:** John J. Hopkins Memorial Park  
Kingston Area Trail

**Erosion and drainage problems:** None Noted

**Structures:**

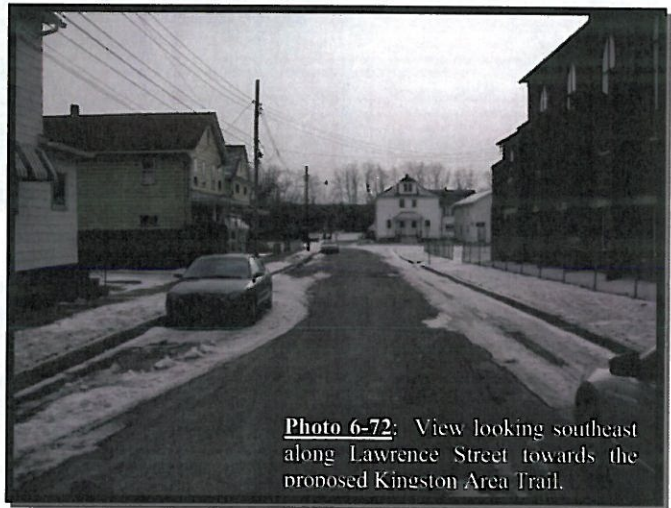
There are no existing structures associated with this proposed section of trail.

**Natural Features:**

This section of proposed trail is located in an urban setting. No significant natural features have been identified.

**Alternative Routes:**

Most of this route will utilize existing sidewalks and roadways within public right of ways. However, at the end of Lawrence Street the trail will run through a property which contains the Toby Creek Tunnel. Although the Luzerne County GIS parcels database does not identify the owner of this property, it is assumed that it is owned by the Luzerne County Flood Protection Agency. However, if this proposed trail alignment is determined to be infeasible, an alternative route has been identified. The alternative route would be to exit from the southern corner of the park and follow Main Street to its intersection with the Kingston Area Trail. Although this route is feasible, it was determined to be less desirable than the proposed route.



**Photo 6-72:** View looking southeast along Lawrence Street towards the proposed Kingston Area Trail.

**Proposed Design:**

- Pathway Surface
  - 985 feet of Crushed Stone Trail through the Park
  - 725 feet of improved sidewalk along Beverly Drive and Lawrence Street
  - 920 feet of Crushed Stone Trail from Lawrence Street to Kingston Area Trail.

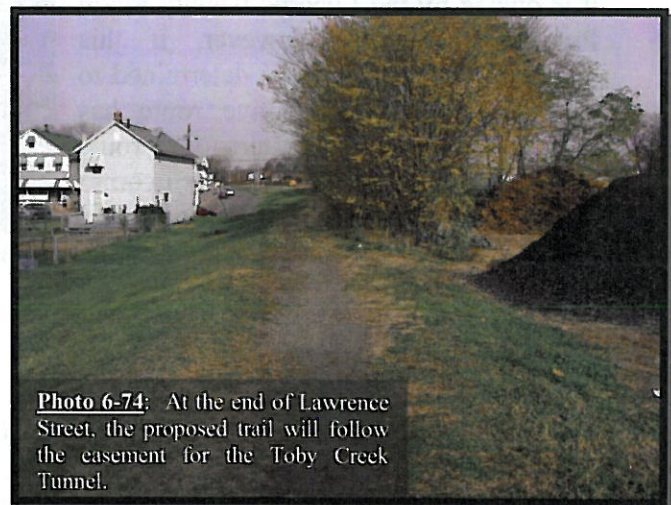


- Structures
  - None required.
- Intersections and Access Points
  - **Beverly Drive**
    - Municipal Road
    - At Grade Crossing
    - Mid-Block Crossing
    - Good Sight Distance
    - Low Traffic Volume
    - Crosswalk Needed
    - Signage Recommended



**Photo 6-73:** Aerial view of the proposed route of the Hopkins Memorial Park Connector Trail and connection into the Kingston Area Trail (in red).

- **Zerby Avenue**
  - Municipal Road
  - One Way Traffic
  - At Grade Crossing
  - Good Sight Distance
  - Low Traffic Volume
  - Crosswalk Improvements Needed
  - Signage Recommended



**Photo 6-74:** At the end of Lawrence Street, the proposed trail will follow the easement for the Toby Creek Tunnel.



- **Auxiliary Facilities**
  - Restrooms
    - Available at John J. Hopkins Memorial Park.
  - Water
    - Available at John J. Hopkins Memorial Park.
  - Emergency Telephone
    - Available at John J. Hopkins Memorial Park.
  - Lighting
    - Pedestrian Lighting recommended at all Street Crossings.
  - Parking / Trail Heads
    - Parking Available at John J. Hopkins Memorial Park.
    - New Trailhead Recommended at John J. Hopkins Memorial Park.
  - Barriers and Emergency Access
    - Balusters may be required to restrict access to Trail at end of Lawrence Street and at the park.
    - Baluster design should provide ability for Emergency Access to trail.
  - Natural Buffers and/or Screening
    - Due to the nature of this section of trail corridor, no buffers and/or screening is required. However, supplemental planting along the trail would be beneficial.

**Environmental Hazards:**

Due to the historic industrial use of this region, a Phase I Environmental Assessment of area around the connection to the Kingston Area Trail is recommended.

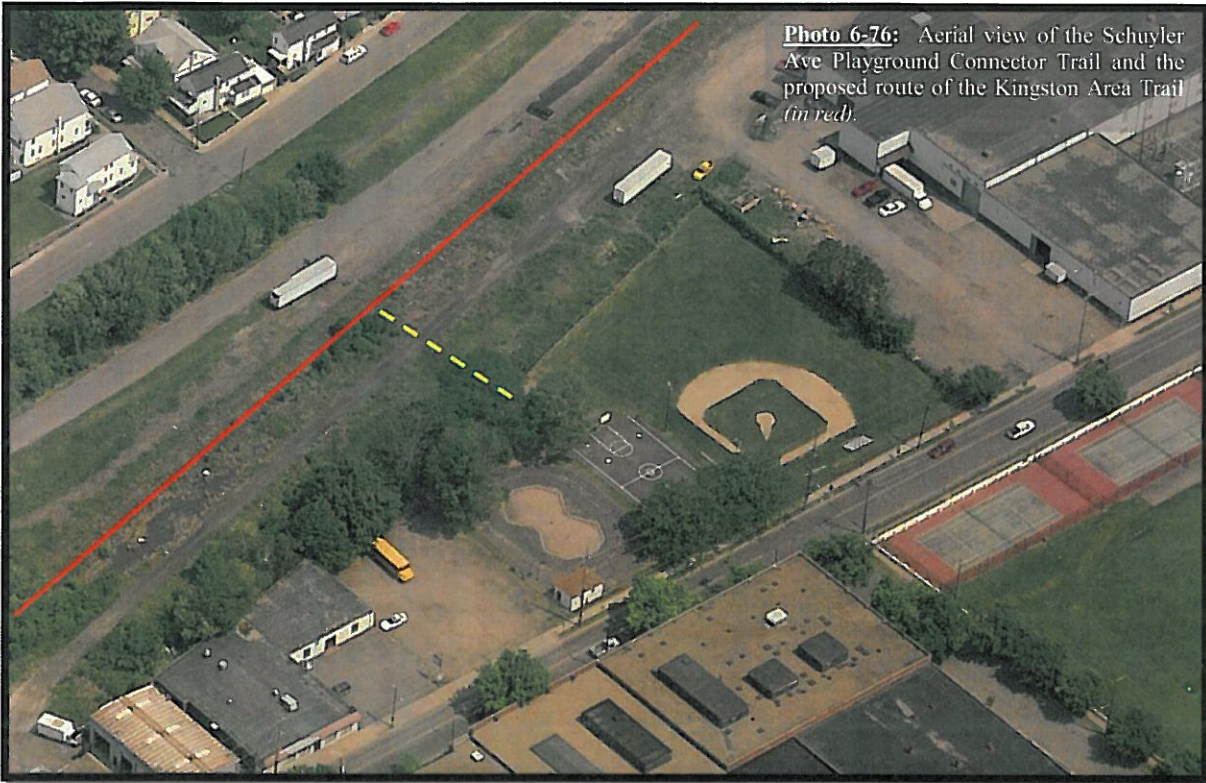


**Photo 6-75:** Dedication plaque at John J. Hopkins Memorial Park.



### 6.7 Schuyler Ave Playground Connector Trail

This Connector Trail will be a short Crushed Stone trail connecting the Schuyler Ave. Playground in Kingston to the Kingston Area Trail.



**Photo 6-76:** Aerial view of the Schuyler Ave Playground Connector Trail and the proposed route of the Kingston Area Trail (in red).

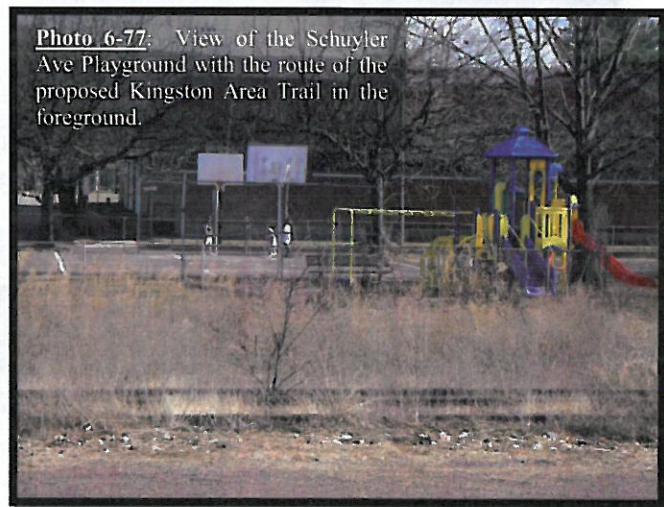
**Distance:** 115 feet

**Existing Surface:** Dirt and Gravel

**Surrounding Land Use / Land Cover:**

This small community playground is located between the Wyoming Seminary football field and the abandoned railroad right of way. Commercial / Industrial buildings are located on the other two sides of the playground. On the opposite side of rail line is a neighborhood of single family homes.

**Ownership:**



**Photo 6-77:** View of the Schuyler Ave Playground with the route of the proposed Kingston Area Trail in the foreground.

Property ID

34G9 00A00A000

Owner

Square Deal Realty, Inc.  
158 Pringle Street  
Kingston, PA 18704



**Proposed linkages:** Schuyler Ave. Playground

**Erosion and drainage problems:** None Noted

**Structures:**

There are no existing structures associated with this proposed section of trail.

**Natural Features:**

This section of proposed trail is located in an urban setting. No significant natural features have been identified. A few mature shade trees are located on the site, however they should not be impacted by the trail.

**Alternative Routes:**

None have been identified.

**Proposed Design:**

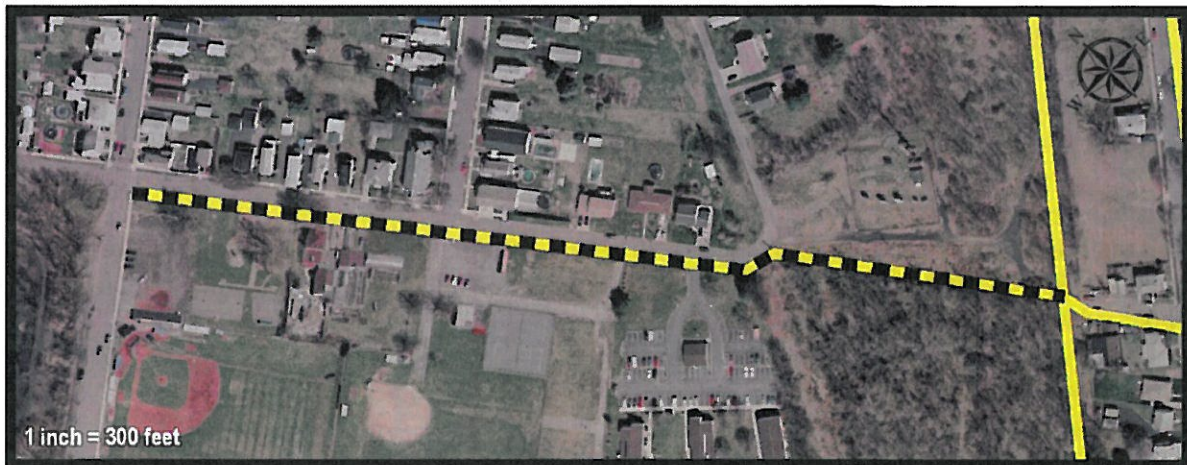
- Pathway Surface
  - 115 feet of 10' Wide Crushed Stone Trail.
- Structures
  - None required
- Intersections and Access Points
  - None required
- Auxiliary Facilities
  - Restrooms
    - Available at Schuyler Ave. Playground.
  - Water
    - Available at Schuyler Ave. Playground.
  - Emergency Telephone
    - Available at Schuyler Ave. Playground.
  - Lighting
    - Pedestrian Lighting recommended at Trail Access.
  - Parking / Trail Heads
    - Limited On-Street Parking Available at Schuyler Ave. Playground.
    - No New Trailhead Recommended.
  - Barriers and Emergency Access
    - Balusters may be required to restrict access to Trail from Schuyler Ave. Playground.
    - Baluster design should provide ability for Emergency Access to trail.
  - Natural Buffers and/or Screening
    - Due to the nature of this section of trail corridor, no buffers and/or screening is required. However, supplemental planting along the trail would be beneficial.

**Environmental Hazards:**

Due to the historic industrial use of this region, a Phase I Environmental Assessment of area around the connection to the Kingston Area Trail is recommended.



## 6.8 Roosevelt Park Connector Trail



**Figure 6-16:** PAMAP Aerial Photography showing the proposed alignment for the Roosevelt Park Connector Trail in Swoyersville Borough.

This connector trail would begin at the parking area at the corner of Church and Tripp Streets in Swoyersville Borough and would run down the Tripp Street right of way to the Kingston Area Trail. This trail would utilize existing and new sidewalk along Tripp Street and Crushed Stone trail from the end of the paved road to the Kingston Area Trail.

**Distance:** 0.30 miles

**Existing Surface:** Existing Concrete Sidewalk, Gravel and Dirt.

### **Surrounding Land Use / Land Cover:**

Roosevelt Park is located in the southern corner of Swoyersville Borough. North of the park are Culm Banks, with the other surrounding land currently developed in residential use. A Public Housing complex, owned by the Housing Authority of Luzerne County is located immediately south of the park. At the end of Tripp Street, between an abandoned rail line and the proposed route of the Kingston Area Trail, there is a 4± acre wooded tract.



**Photo 6-78:** View looking southeast along Tripp Street from Roosevelt Park.





**Photo 6-79:** Aerial view of the proposed route of the Roosevelt Park Connector Trail.

**Ownership:**

All of the proposed trail alignment will be located within existing municipal right-of-way.

**Proposed linkages:** Roosevelt Park  
Kingston Area Trail

**Erosion and drainage problems:** None Noted

**Structures:**

There are no existing structures associated with this proposed section of trail.

**Natural Features:**

At the end of Tripp Street, between an abandoned rail line and the proposed route of the Kingston Area Trail, there is a 4± acre wooded tract. This area of deciduous hardwoods has revegetated in the previously disturbed area between the rail grades. The soils in this area have been significantly disturbed and the topography is very uneven. Although the quality of this woodland habitat is minimal, it does support a small wildlife population. The proposed trail should have no impact upon the wooded area.

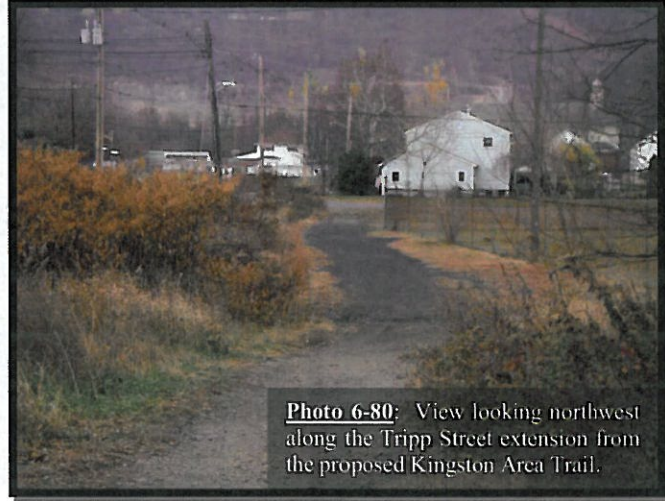
**Alternative Routes:**

Most of this route will utilize existing sidewalks and roadways within public right of ways. However, at the end of Lawrence Street the trail will run through a property which contains the Toby Creek Tunnel. Although the Luzerne County GIS parcels database does not identify the owner of this property, it is assumed that it is owned by the Luzerne County Flood Protection Agency. However, if this proposed trail alignment is determined to be infeasible, an alternative route has been identified. The alternative route would be to exit from the southern corner of the park and follow Main Street to its intersection with the Kingston Area Trail. Although this route is feasible, it was determined to be less desirable than the proposed route.



**Proposed Design:**

- Pathway Surface
  - 985 feet of Crushed Stone Trail through the Park
  - 725 feet of improved sidewalk along Beverly Drive and Lawrence Street
  - 920 feet of Crushed Stone Trail from Lawrence Street to Kingston Area Trail.
- Structures
  - None required.
- Intersections and Access Points
  - **Beverly Drive**
    - Municipal Road
    - At Grade Crossing
    - Mid-Block Crossing
    - Good Sight Distance
    - Low Traffic Volume
    - Crosswalk Needed
    - Signage Recommended
  - **Zerby Avenue**
    - Municipal Road
    - One Way Traffic
    - At Grade Crossing
    - Good Sight Distance
    - Low Traffic Volume
    - Crosswalk Improvements Needed
    - Signage Recommended
- Auxiliary Facilities
  - Restrooms
    - Available at Roosevelt Park.
  - Water
    - Available at Roosevelt Park.
  - Emergency Telephone
    - Available at Roosevelt Park.
  - Lighting
    - Pedestrian Lighting recommended at all Street Crossings.
  - Parking / Trail Heads
    - Parking Available at Available at Roosevelt Park Park.
    - New Trailhead Recommended at Available at Roosevelt Park Park.
  - Barriers and Emergency Access
    - Balusters may be required to restrict access to Trail at end of Lawrence Street.
    - Baluster design should provide ability for Emergency Access to trail.
  - Natural Buffers and/or Screening
    - Due to the nature of this section of trail corridor, no buffers and/or screening is required. However, supplemental planting along the trail would be beneficial.



**Photo 6-80:** View looking northwest along the Tripp Street extension from the proposed Kingston Area Trail.

**Environmental Hazards:**

Due to the historic industrial use of this region, a Phase I Environmental Assessment of area at end of Lawrence Street is recommended.



## 6.9 Forty Fort Connector Trail



**Figure 6-17:** PAMAP Aerial Photography showing the proposed alignment for the Forty Fort Connector Trail to the proposed Kingston Area Trail.

This connector trail would utilize the existing sidewalks and roadway to connect the Forty Fort Little League Baseball Fields and Elementary School to the trail system via Tripp Street. This trail will also intersect with the Roosevelt Park Connector Trail.

**Distance:** 1960 feet

**Existing Surface:** Existing Concrete Sidewalk, Asphalt Roadway and school field.

**Surrounding Land Use / Land Cover:**

This proposed trail is located in an area of single family homes in Forty Fort Borough. The trail will tie into the local little league baseball field and elementary school.

**Ownership:**

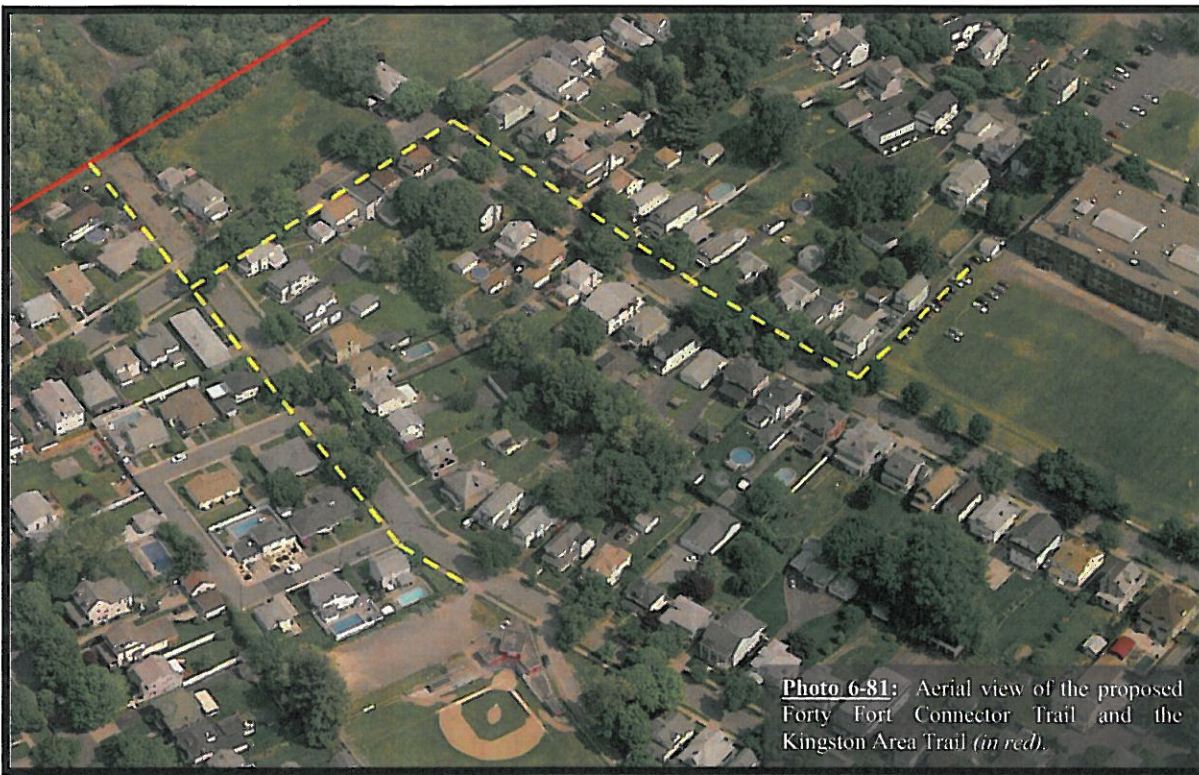
The majority of this trail alignment is located within public right of way of Tripp, Oak and Murray Streets.

<u>Property ID</u>	<u>Owner</u>
21G10NW1002024000	Forty Fort School District 50 Dana Street Forty Fort, PA 18704
21G10NW1010002000	Forty Fort Baseball for Boys and Girls Wyoming Avenue Forty Fort, PA 18704

**Proposed linkages:** Forty Fort Elementary School  
Forty Fort Little League Baseball Fields

**Erosion and drainage problems:** None Noted





**Structures:**

There are no existing structures associated with this proposed section of trail.

**Natural Features:**

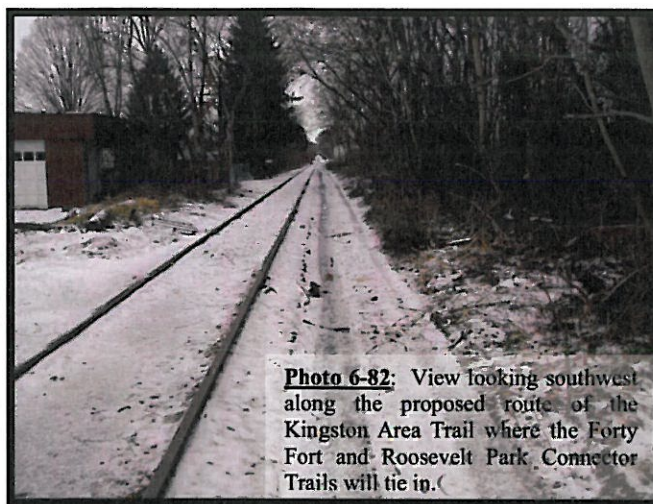
This section of proposed trail is located in an urban setting. Several mature shade trees line the street along Tripp, Oak and Murray Streets.

**Alternative Routes:**

Most of this route will utilize existing sidewalks and roadway within public right of ways. Therefore, there should be no alternative route have been discussed. However if needed, Dana Street could be utilized to access the Forty Fort Elementary School rather than Oak Street.

**Proposed Design:**

- Pathway Surface
  - 1740 feet of improved sidewalk
  - 220 feet of 10' Crushed Stone Trail
- Structures
  - A new at-grade rail crossing will be needed for this connector trail.





- Intersections and Access Points

- **Oak Street**

- Municipal Road
- Existing Crossing at STOP
- Good Sight Distance
- Low Traffic Volume
- Crosswalk Improvements Needed
- Signage Recommended

- **Tripp Manor (2 crossings)**

- Municipal Road
- Existing Crossing at STOP
- Good Sight Distance
- Low Traffic Volume
- Crosswalk Improvements Needed
- Signage Recommended

- **Murray Street**

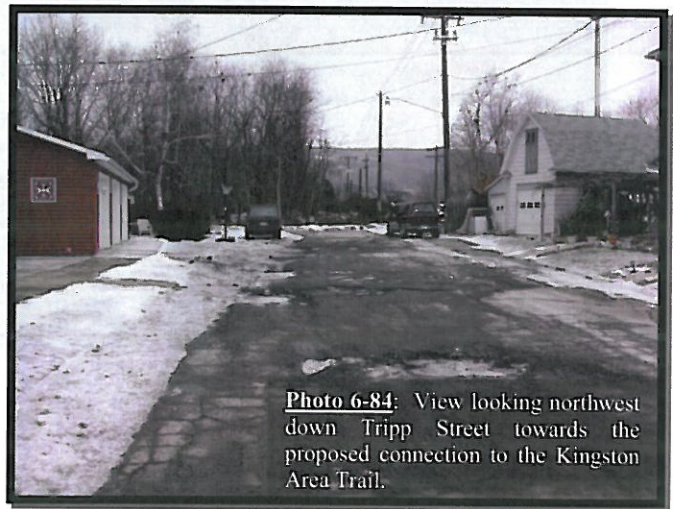
- Municipal Road
- Existing Crossing at 4-way STOP
- Good Sight Distance
- Moderate Traffic Volume
- Crosswalk Improvements Needed
- Signage Recommended

- Auxiliary Facilities

- Restrooms
  - Available at Little League Fields.
- Water
  - Available at Little League Fields.
- Emergency Telephone
  - Available at Little League Fields.
- Lighting
  - Pedestrian Lighting recommended at all Street Crossings.
- Parking / Trail Heads
  - On-Street Parking Available
  - Parking Lots available at Elementary School and Little League Fields.
  - No New Trailheads Recommended for this Segment of Trail.
- Barriers and Emergency Access
  - Balusters may be required at end of Tripp Street to restrict access to Kingston Area Trail and at Oak Street to restrict access to Forty Fort Elementary School.
  - Baluster design should provide ability for Emergency Access to trail.
- Natural Buffers and/or Screening
  - Due to the nature of this section of trail corridor, no buffers and/or screening is required. However, supplemental planting along the trail would be beneficial.



**Photo 6-83:** View looking southeast down Tripp Street from the crosswalk across Murray Street.



**Photo 6-84:** View looking northwest down Tripp Street towards the proposed connection to the Kingston Area Trail.

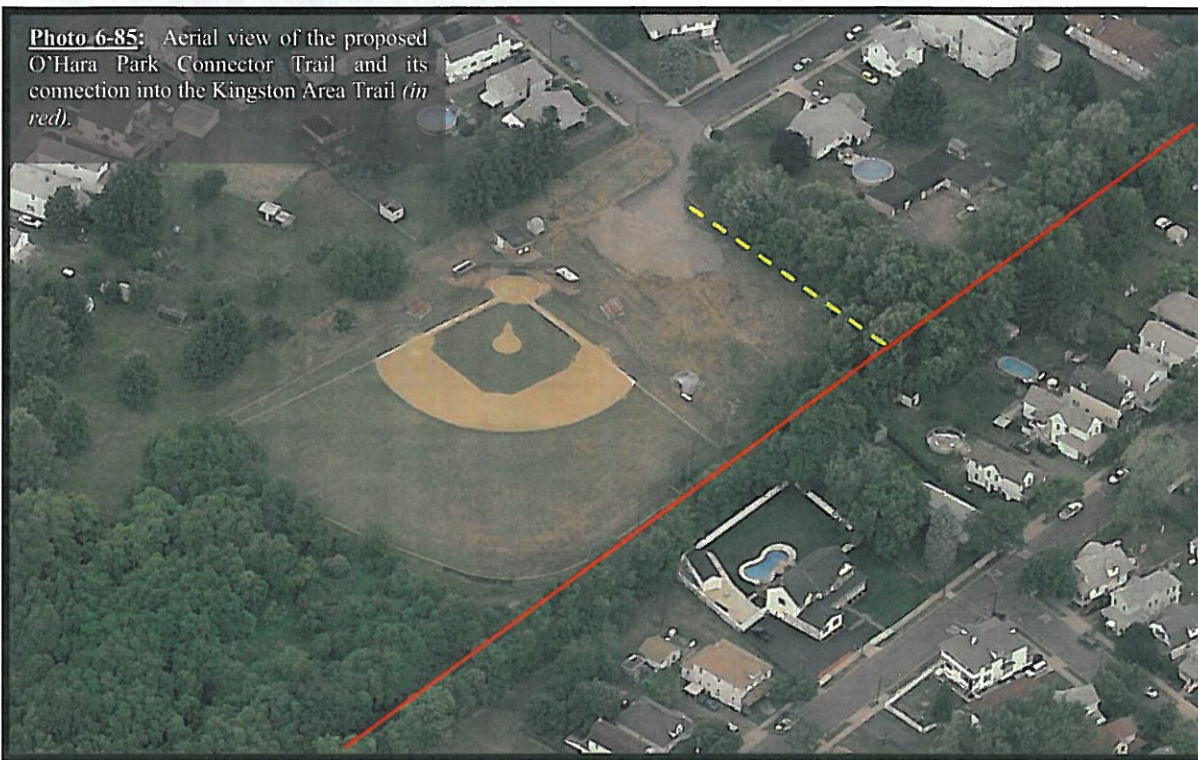
**Environmental Hazards:**

Due to the historic industrial use of this region, a Phase I Environmental Assessment of area around the connection to the Kingston Area Trail is recommended.



### 6.10 O'Hara Park Connector Trail

This Connector Trail will be a short Crushed Stone trail connecting O'Hara Field in Swoyersville to the Kingston Area Trail.

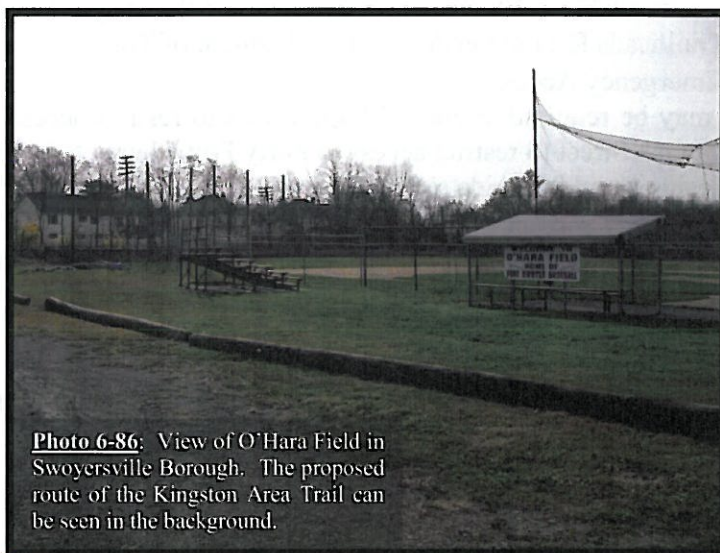


**Distance:** 230 feet

**Existing Surface:** Dirt and Gravel

**Surrounding Land Use / Land Cover:**

This small community baseball field in a residential area in southern Swoyersville Borough. A small woodlot is located immediately southwest of the field. The surrounding community is made up of single family homes.





**Ownership:**

<u>Property ID</u>	<u>Owner</u>
59F9 00A014000	Forty Fort Baseball for Boys and Girls Wyoming Avenue Forty Fort, PA 18704

**Proposed linkages:** O'Hara Field

**Erosion and drainage problems:** None Noted

**Structures:**

There are no existing structures associated with this proposed section of trail.

**Natural Features:**

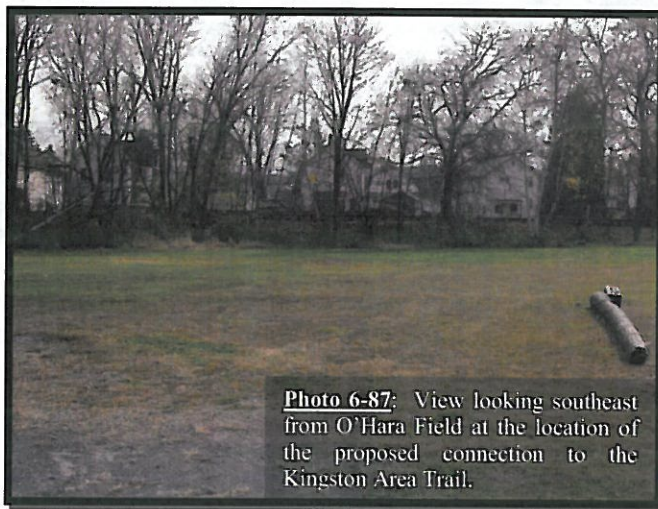
This section of proposed trail is located in an urban setting. No significant natural features have been identified. A few mature shade trees are located on the site, however they should not be impacted by the trail.

**Alternative Routes:**

None have been identified.

**Proposed Design:**

- Pathway Surface
  - 230 feet of 10' Wide Crushed Stone Trail.
- Structures
  - Grading may required to connect with Kingston Area Trail.
- Intersections and Access Points
  - None required
- Auxiliary Facilities
  - Restrooms
    - Available at O'Hara Field
  - Water
    - Available at O'Hara Field
  - Emergency Telephone
    - Available at O'Hara Field
  - Lighting
    - Pedestrian Lighting recommended at Trail Access.
  - Parking / Trail Heads
    - Available at O'Hara Field.
    - No New Trailhead Recommended.
  - Barriers and Emergency Access
    - Balusters may be required to restrict access to Trail from O'Hara Field.
    - Baluster design should provide ability for Emergency Access to trail.
  - Natural Buffers and/or Screening
    - Due to the nature of this section of trail corridor, no buffers and/or screening is required. However, supplemental planting along the trail would be beneficial.



**Photo 6-87:** View looking southeast from O'Hara Field at the location of the proposed connection to the Kingston Area Trail.



**Environmental Hazards:**

Due to the historic industrial use of this region, a Phase I Environmental Assessment of area around the connection to the Kingston Area Trail is recommended.

**6.11 Seminary Place Connector Trail**



**Photo 6-88:** Aerial view of the proposed Seminary Place Connector Trail in Forty Fort Borough.

This connector trail would utilize the existing sidewalks and roadway along Seminary Place in Forty Fort Borough. The proposed trail and bike lane would provide students from the Wyoming Seminary Lower School access to the regional trail system. The trail will also connect Wyoming Avenue (Route 11) with the Kingston Area Trail.

**Distance:** 1020 feet

**Existing Surface:** Existing Concrete Sidewalk and Asphalt Roadway

**Surrounding Land Use / Land Cover:**

This proposed trail is located in an area of single family homes in Forty Fort Borough. The property on the eastern side of Seminary Place is the Wyoming Seminary Lower School and athletic fields.

**Ownership:**

The entire trail route will be located within the public right-of-way for Seminary Place. is

**Proposed linkages:** Wyoming Seminary Lower School  
Wyoming Boulevard (Route 11)

**Erosion and drainage problems:** None Noted



**Structures:**

There are no existing structures associated with this proposed section of trail.

**Natural Features:**

This section of proposed trail is located in a residential with typical landscaping. Several mature shade trees are located on the campus of Wyoming Seminary Lower School.

**Alternative Routes:**

No Alternative Route has been identified.

**Proposed Design:**

- Pathway Surface
  - 1020 feet of improved sidewalk and bikeway
- Structures
  - Pedestrian rail crossing will be required for this trail alignment.
- Intersections and Access Points
  - **Murray Street**
    - Municipal Road
    - Crossing at Intersection
    - Good Sight Distance
    - Moderate Traffic Volume
    - Crosswalk Improvements Needed
    - Signage Recommended
- Auxiliary Facilities
  - Restrooms
    - None Available or Proposed on this Segment of Trail.
  - Water
    - None Available or Proposed on this Segment of Trail.
  - Emergency Telephone
    - None Available or Proposed on this Segment of Trail.
  - Lighting
    - Pedestrian Lighting recommended at all Street Crossings.
  - Parking / Trail Heads
    - On-Street Parking Available
    - No New Trailheads Recommended for this Segment of Trail.
  - Barriers and Emergency Access
    - Balusters may be required to restrict access to Kingston Area Trail.
    - Baluster design should provide ability for Emergency Access to trail.
  - Natural Buffers and/or Screening
    - Due to the nature of this section of trail corridor, no buffers and/or screening is required. However, supplemental planting along the trail would be beneficial.

**Environmental Hazards:**

Due to the historic industrial use of this region, a Phase I Environmental Assessment of area around the connection to the Kingston Area Trail is recommended.



## 6.12 Luzerne County Park Connector Trail



**Figure 6-18:** PAMAP Aerial Photography showing the proposed alignment for the Luzerne County Park Connector Trail from the Kingston Area Trail, through the Luzerne County Sports Complex to the Luzerne County Levee Trail.

This connector trail would utilize the existing sidewalks and roadway from the Kingston Area Trail, down Dennison Street to an existing signalized intersection at Wyoming Avenue (Route 11). The trail will cross over the Abrahams Creek Bridge and turn to enter into the Luzerne County Sports Complex. The trail will then wind through the County land to merge into the Luzerne County Levee Trail.

**Distance:** 0.85 miles

**Existing Surface:** Existing Concrete Sidewalk, Asphalt Roadway and Grass.

### **Surrounding Land Use / Land Cover:**

This proposed trail begins at the Kingston Area Trail in a residential section of Forty Fort Borough. As it progresses south along Dennison Street, the trail will go past the historic Dennison House to Wyoming Avenue. Once the trail crosses Wyoming Avenue, it will enter the Luzerne County Sports Complex. This park contains several recreation fields and undeveloped land.

### **Ownership:**

A portion of the trail alignment is located within public right of way of Dennison Street and Wyoming Avenue. The remaining sections of trail pass through the following parcels:

<u>Property ID</u>	<u>Owner</u>
21F10 00A004000	County of Luzerne
21F10 00A005000	River Street
21F10 00A006000	Wilkes Barre, PA 18702
21F10 00A007000	
21F10 00A008000	Wyoming Valley Airport
	Wyoming Avenue
	Forty Fort, PA 18704



21F10 00A04A000

Commonwealth of Pennsylvania  
Harrisburg, PA

**Proposed linkages:** The Dennison House  
Luzerne County Sports Complex  
Luzerne County Parks Department

**Erosion and drainage problems:**

Numerous drainage problems associated with Abrahams Creek and the floodplain of the Susquehanna River existing in the Luzerne County Sports Complex. Drainage issues will be addressed upon delineation of a final trail alignment.

**Structures:**

Bridge over Abrahams Creek (*roadway with minimal sidewalk width*)

**Natural Features:**

Within Luzerne County Sports Complex there are several natural areas which are associated with Abrahams Creek. Deciduous forested wetlands and open fields border the athletic fields and provide wildlife habitat.

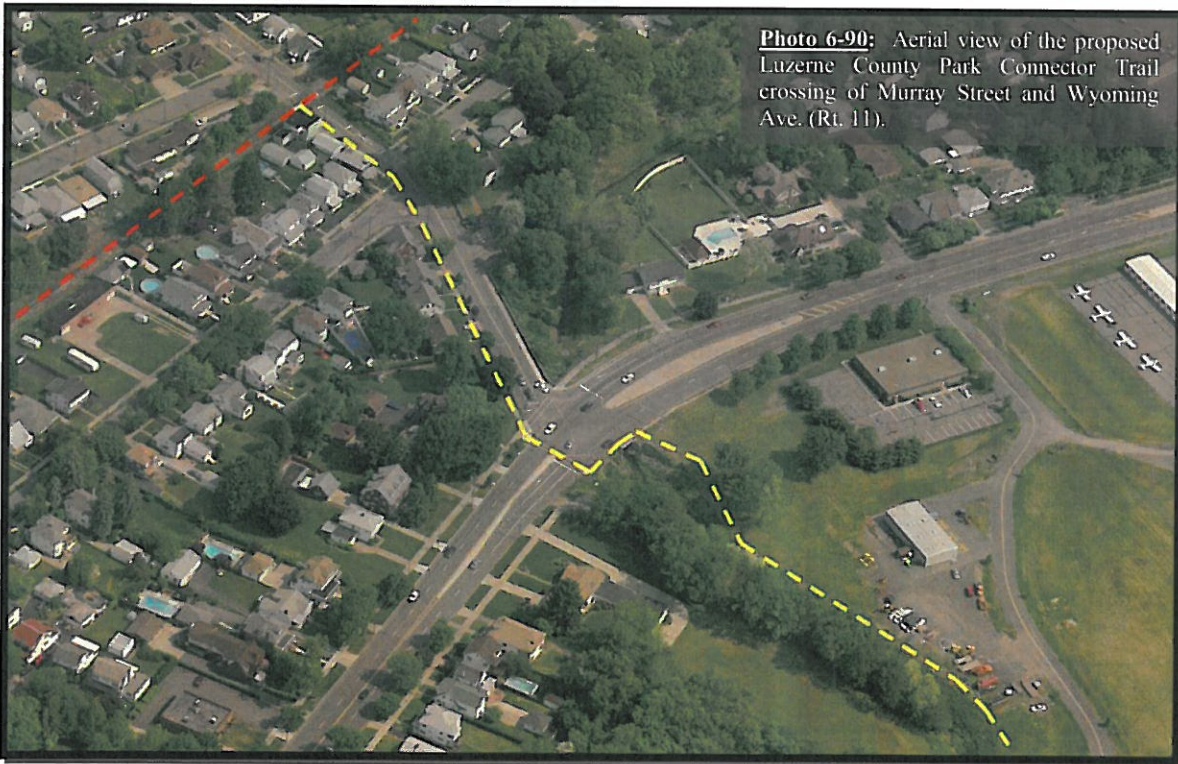
**Alternative Routes:**

If it is determined that the proposed route is unfeasible, then access to the Luzerne County Sports Complex can be accomplished via the Levee trail along the river.

**Photo 6-89:** View of the historic Dennison House in Forty Fort Borough.



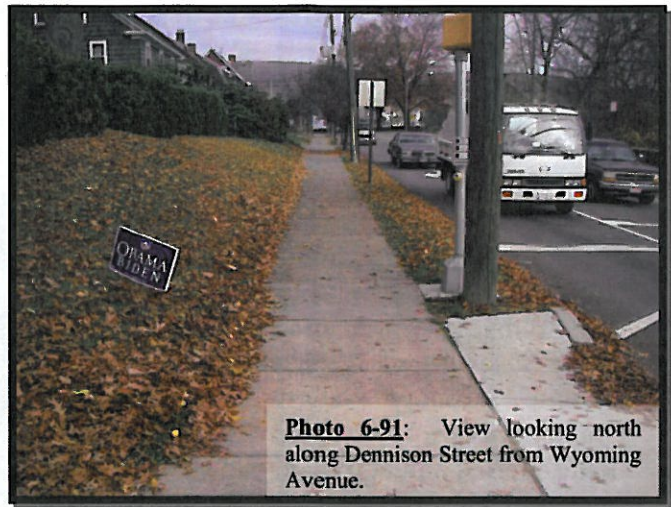
**Photo 6-90:** Aerial view of the proposed Luzerne County Park Connector Trail crossing of Murray Street and Wyoming Ave. (Rt. 11).



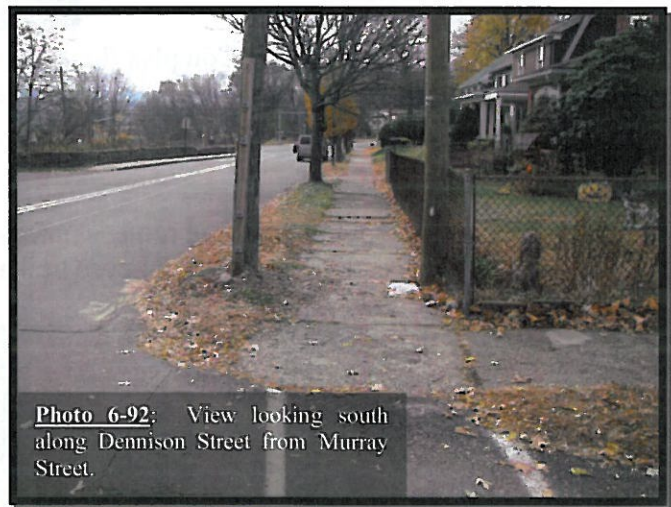


**Proposed Design:**

- Pathway Surface
  - 820 feet of improved sidewalk
  - 4480 feet of 10' Crushed Stone Trail
- Structures
  - Improvements to the Abrahams Creek Bridge are recommended to increase the width of the sidewalk along Wyoming Avenue.
- Intersections and Access Points
  - **Murray Street**
    - Municipal Road
    - Crossing at Intersection
    - Good Sight Distance
    - Moderate Traffic Volume
    - Crosswalk Improvements Needed
    - Signage Recommended
  - **Wyoming Avenue (Route 11)**
    - State Route 11
    - Existing Signalized Crosswalk
    - Good Sight Distance
    - Moderate/High Traffic Volume
    - Signage Recommended
- Auxiliary Facilities
  - Restrooms
    - Available at Sports Complex.
  - Water
    - Available at Sports Complex.
  - Emergency Telephone
    - Available at Sports Complex.
  - Lighting
    - Pedestrian Lighting recommended at all Street Crossings.
  - Parking / Trail Heads
    - Parking Available at Sports Complex.
    - No New Trailheads Recommended for this Segment of Trail.
  - Barriers and Emergency Access
    - Balusters may be required at Dennison Street to restrict access to Kingston Area Trail.
    - Baluster design should provide ability for Emergency Access to trail.



**Photo 6-91:** View looking north along Dennison Street from Wyoming Avenue.



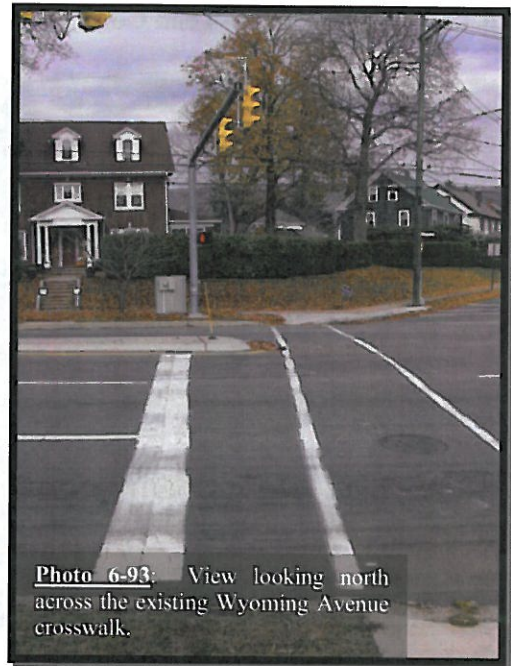
**Photo 6-92:** View looking south along Dennison Street from Murray Street.



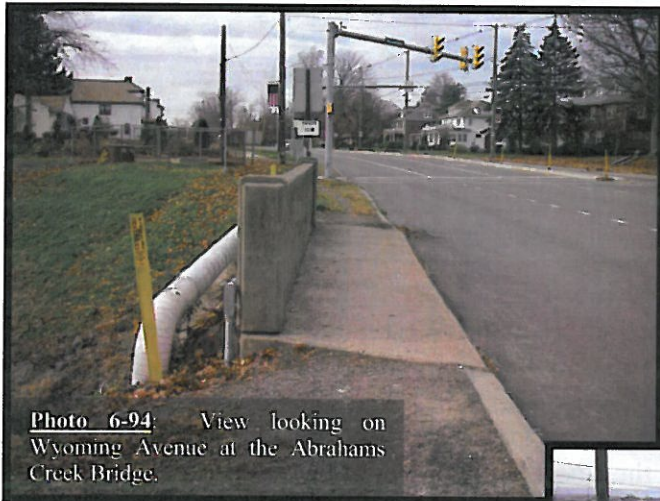
- Natural Buffers and/or Screening
  - Due to the nature of this section of trail corridor, no buffers and/or screening is required. However, supplemental planting along the trail would be beneficial.

**Environmental Hazards:**

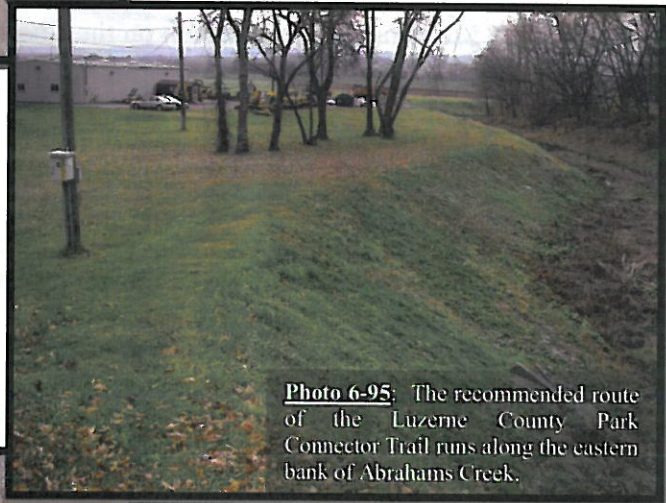
Due to the historic industrial use of this region, a Phase I Environmental Assessment of currently undeveloped areas is recommended.



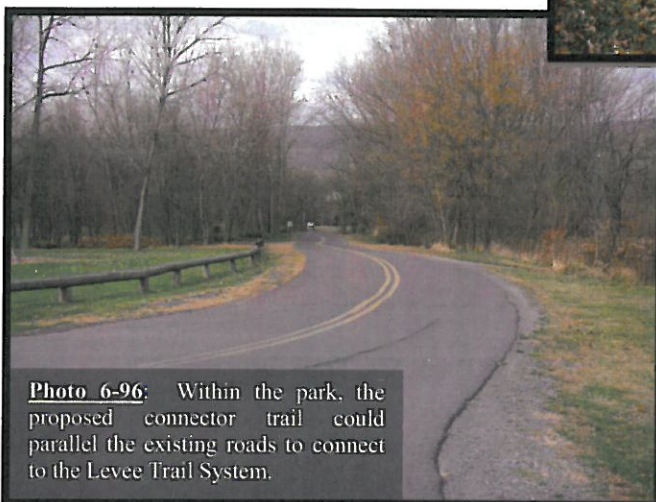
**Photo 6-93:** View looking north across the existing Wyoming Avenue crosswalk.



**Photo 6-94:** View looking on Wyoming Avenue at the Abrahams Creek Bridge.



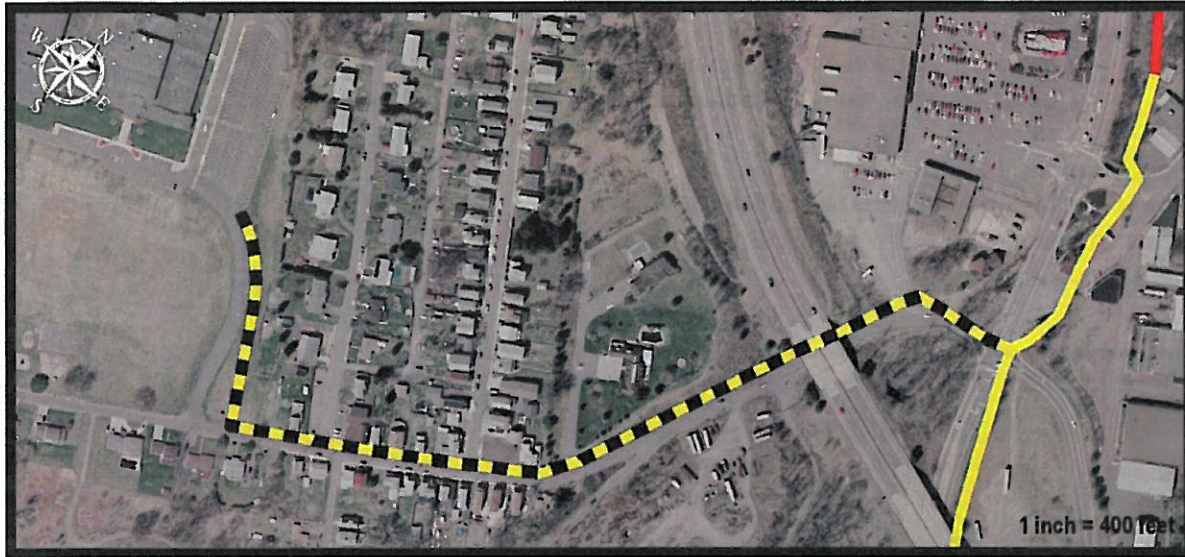
**Photo 6-95:** The recommended route of the Luzerne County Park Connector Trail runs along the eastern bank of Abrahams Creek.



**Photo 6-96:** Within the park, the proposed connector trail could parallel the existing roads to connect to the Levee Trail System.



### 6.13 West Side Vo-Tech Connector Trail



**Figure 6-19:** PAMAP Aerial Photography showing the proposed alignment for the West Side Vo-Tech Connector Trail leading to the proposed Back Mountain Trail Extension.

This connector trail will provide a connection from the West Side Vo-Tech School to the proposed Back Mountain Trail Extension. The trail will begin at the Vo-Tech School and travel northeast along Evans Street (*State Route K038*). The trail will pass under Route 309 via an existing underpass and over Toby Creek on the Evan Street Bridge. This connector trail will link into the Back Mountain Trail Extension on the eastern side of Union Street, prior to the crossing of the Route 309 on-ramp.

**Distance:** 0.44 mile

**Existing Surface:** Existing sidewalk width is insufficient for trail, therefore major improvements will be required. Parking on the sidewalk along Evans Street was also observed during site inspections. The lower portion of the trail alignment will be built into a moderately steep slope in the western side of Evan Street.

**Surrounding Land Use / Land Cover:**

The West Side Vo-Tech School is located near the center of Pringle Borough. Most of the surrounding community is made up of single family homes and is readily accessible to the Vo-Tech School.

**Ownership:**

<u>Property ID</u>	<u>Owner</u>
52G9S1 004001000	West Side Area Vo-Tech School 75 Evans Road Pringle, PA 18704-1856

**Proposed linkages:** West Side Area Vo-Tech School to Back Mt. Trail Extension

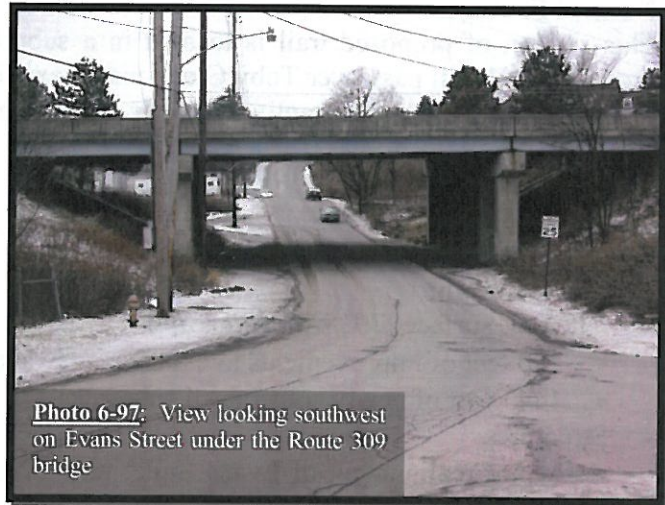
**Erosion and drainage problems:** None Noted



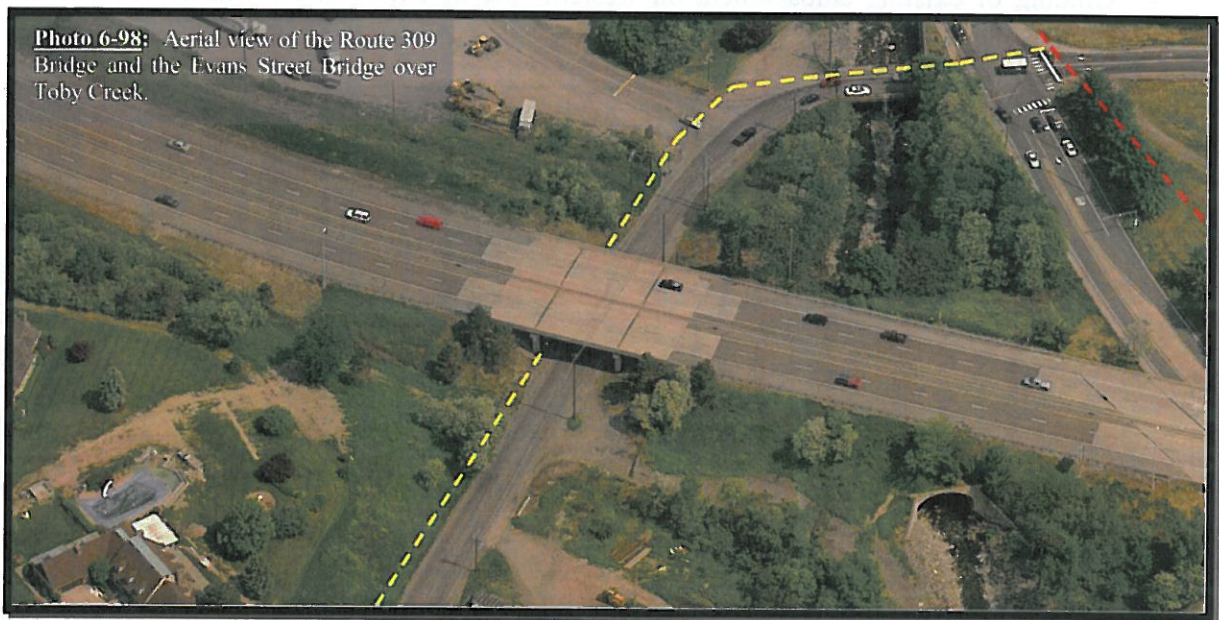
**Structures:**

Route 309 Underpass

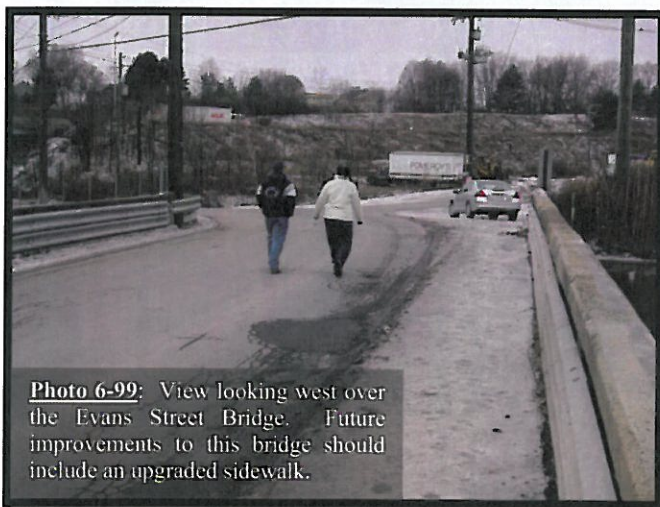
This PennDOT bridge carries State Route 309 over Evans Street. Initial evaluation of this underpass indicated that there is sufficient room to add a trail along Evans Street as it passes under Route 309. Some minor realignment of the roadway may be necessary to allow for sufficient space on the western side of the roadway (*right side of adjacent photo*) for the proposed trail.



**Photo 6-97:** View looking southwest on Evans Street under the Route 309 bridge



**Photo 6-98:** Aerial view of the Route 309 Bridge and the Evans Street Bridge over Toby Creek.



**Photo 6-99:** View looking west over the Evans Street Bridge. Future improvements to this bridge should include an upgraded sidewalk.

Evans Street Bridge over Toby Creek

This PennDOT bridge carries Evans Street over Toby Creek. A narrow sidewalk is located on the north side of this bridge which can currently be incorporated into the trail. However, this bridge is in poor condition and future reconstruction could easily incorporate a wider sidewalk.



**Natural Features:**

This section of proposed trail is located in a suburban setting. As previously discussed, the proposed trail will pass over Toby Creek via an existing bridge. No new impacts are anticipated to Toby Creek which is currently channelized throughout this area.

**Alternative Routes:**

None have been identified.

**Proposed Design:**

- Pathway Surface (10' Wide Sidewalk)
  - 560 feet of improvements to existing sidewalks
  - 1443 feet of newly constructed sidewalk
- Structures
  - Minor realignment of Evans Street may be required to provide sufficient space for trail under Route 309 underpass.
  - Improvements to the Evans Street Bridge over Toby Creek are recommended.
  - Grading of existing embankment on western side of Evans Street will be required to accommodate the trail.



Photo 6-100: Aerial view of the proposed trail crossings of Valleyview Drive and Cooper Street.

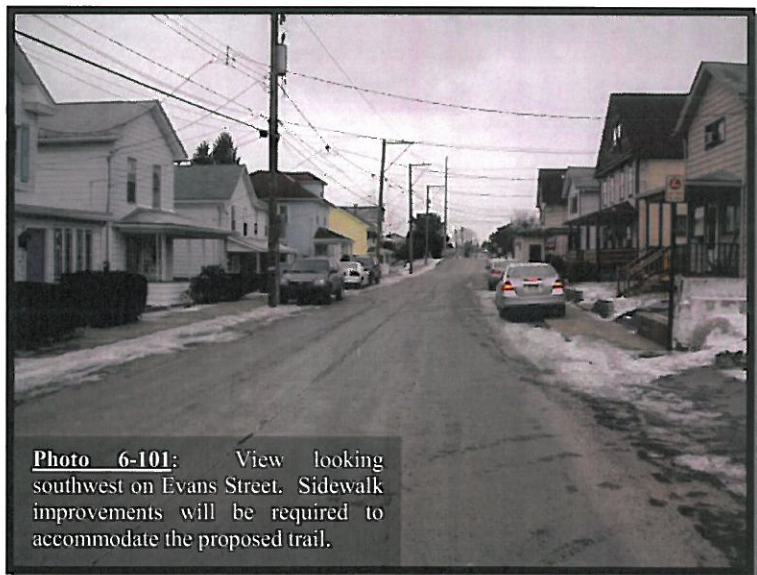
- Intersections and Access Points
  - **Valleyview Drive**
    - Municipal Road
    - Existing Crossing at STOP
    - Good Sight Distance
    - Low Traffic Volume
    - Crosswalk Improvements Needed
    - Signage Recommended



- **Cooper Street**
  - Municipal Road
  - Existing Crossing at STOP
  - Good Sight Distance
  - Low Traffic Volume
  - Crosswalk Improvements Needed
  - Signage Recommended
- **Shopping Plaza Driveways**
  - Private Roadway
  - Existing Crossing at STOP
  - Good Sight Distance
  - Low Traffic Volume
  - Crosswalk Improvements Needed
  - Signage Recommended
- **Auxiliary Facilities**
  - Restrooms
    - None available on this section of trail.
  - Water
    - None available on this section of trail.
  - Emergency Telephone
    - None available on this section of trail.
  - Lighting
    - Pedestrian Lighting recommended along Evans Street and at crossings.
  - Parking / Trail Heads
    - Parking available at West Side Vo-Tech School.
    - New Trailhead Recommended.
  - Barriers and Emergency Access
    - None Required
  - Natural Buffers and/or Screening
    - Due to the nature of this section of trail corridor, no buffers and/or screening is required. However, supplemental planting along the trail would be beneficial.

**Environmental Hazards:**

Due to the existing development along this section of trail, a Phase I Environmental Assessment does not appear to be necessary.



**Photo 6-101:** View looking southwest on Evans Street. Sidewalk improvements will be required to accommodate the proposed trail.







## Chapter 7: Design Standards

### 7.1 Trails

The following recommendations are not intended to replace or conflict with current guidelines and standards, but to supplement those guidelines. The following design standards are intended to serve as a guide in the future design the proposed trail system.

#### 7.1.1 Surfaces

Several factors must be considered when choosing a trail surface including:

- User acceptance and satisfaction
- Accessibility
- Cost to purchase and install materials
- Cost of maintaining the surface
- Life expectancy
- Availability of material

In addition, a decision must be made on whether the surface is going to be a hard or soft surface. Hard Surfaces are more accommodating for multi-use trails and can withstand frequent use. However, they are more expensive to build. Soft surface trails are less expensive to build. However, they often do not hold up well under heavy use or varying weather conditions and require more maintenance. Since this trail system will be heavily used and the weather conditions in the Wyoming Valley can be extreme, a hard surface trail appears to be the local choice for this project. Two types of hard surface trail systems are currently used in this region, crushed stone and asphalt.

**Crushed stone:** (*limestone, sandstone, crushed rock*) Crushed stone holds up well under heavy use and is more economical than asphalt. This trail surface can accommodate nearly every type of trail use, except inline skaters. Existing crushed stone trail systems in the region include the Back Mountain Trail, Susquehanna Warrior Trail and the D&L Trail System. This trail surface is recommended for most of the trail system proposed in this study. It is well suited for the proposed sections of trail on abandoned rail beds and those adjacent to the active rail lines. Construction of this type of trail will consist of a minimum 2 inches of compacted #10 crushed stone over 6 inches of compacted 2RC stone.

**Asphalt:** This trail surface is well suited for most user types including bicycle commuters and inline skaters. Although the cost to construct this trail surface is higher, it is more stable and has a life expectancy of seven to 15 years. Asphalt trails are often used in urban areas or near trailheads and access points where stability is important. Existing asphalt trail systems in the region include the West Side Trail and Luzerne County Levee Trail System. Due to its high cost, asphalt is currently recommended only on the sections of trail which require the greatest stability (*ie. steep slopes, levees, urban areas*). If an “upgrade” to asphalt is desired for sections of trail in the future, the proposed crushed stone surface will provide an excellent base for the pavement. Construction of this type of trail will consist of a minimum 2 inches bituminous concrete over 4-6” of compacted 2A stone and geotextile.

**Concrete:** Sidewalks will also be upgraded in some areas to facilitate their incorporation into urban sections of the proposed trail system. A minimum of 4 inches pour-in-place (3,000 psi) concrete will be installed over 4-6 inches of compacted 2A stone. Reinforcement



and increased concrete thickness will be required at locations where vehicles will cross or use the walk. Provide a maximum 2% cross slope to move storm water off the surface.

**Boardwalks:** In order to cross wetlands and areas of steep cross grade, sections of boardwalk may be incorporated into the proposed trail. However, due to their excessive price, boardwalks are only recommended in limited areas where no other trail surfaces are feasible.

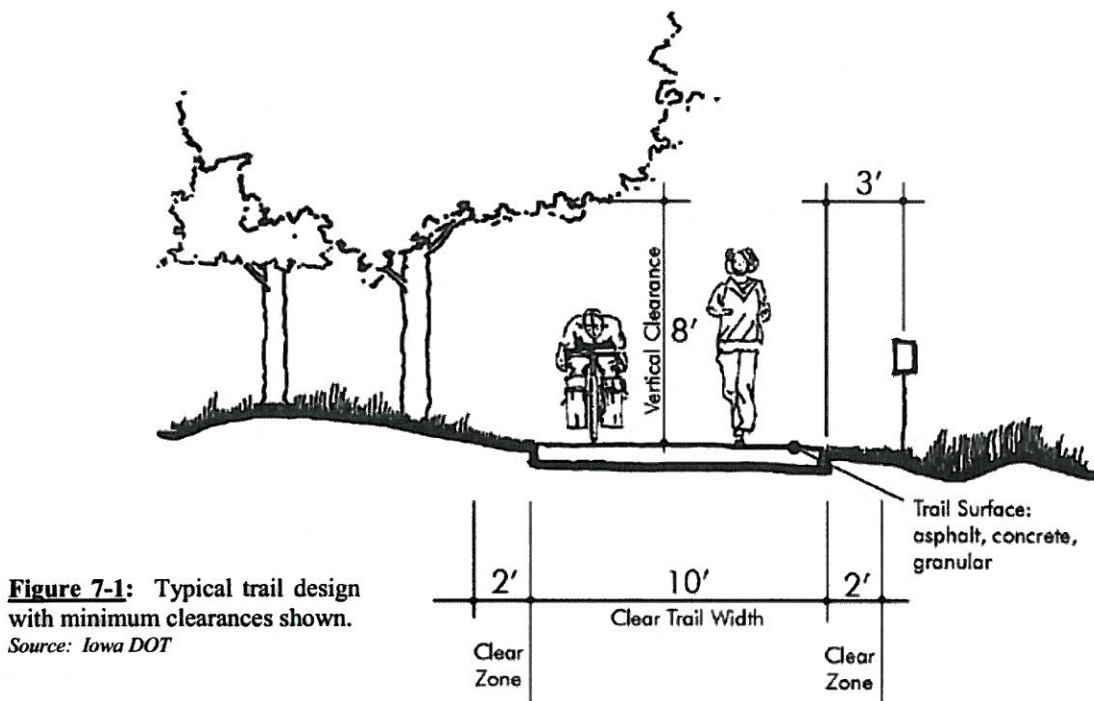
### 7.1.2 Standard Trail

As previous stated, the majority of the trails proposed will have a crushed stone surface. However, in some areas an asphalt surface may be more desirable. The standard trail width proposed is 10 feet with a minimum of two feet of cleared shoulder on each side of the trail. This width will be sufficient for two way travel and safe passage of slower trail users. Design considerations should be made to meet current ADA Standards. Maximum trail slopes should be limited as follows:

- 8.3 percent for a maximum of 200 ft
- 10 percent for a maximum of 30 ft
- 12.5 percent for a maximum of 10 ft

Near the top and bottom of the maximum grade segments, the grade should gradually transition to less than 5 percent. In addition, rest intervals should be provided within 25 feet of the top and bottom of a maximum grade segment. The cross slope of the trail should not exceed 2 percent.

Ideally, objects should not protrude into any portion of the clear tread width of the trail. If an object must protrude into the travel space, it should not extend more than 4 inches. Furthermore, a minimum vertical clearance of 8 feet should be provided above the trail. If equestrian use of the trails is anticipated, the minimum vertical clearance should be increased to 12 feet.



**Figure 7-1:** Typical trail design with minimum clearances shown.  
Source: Iowa DOT



### 7.1.3 Rails with Trails

A significant portion of the Kingston Area Trail will be adjacent to an active rail spur which is owned by the Redevelopment Authority of Luzerne County. This “Rails with Trails” segment will require additional safety measures and buffers. Rails with Trails are operating successfully around the country under a wide variety of conditions. Some are very close to rail tracks and others further away. Some use extensive separating fences or barriers. Some are next to high-speed, high-frequency train services. Others are on industrial branch lines or tourist railroads with slower trains operating only a few times per week. Some have at-grade crossings while others use underpasses or overpasses. There are currently no national standards or guidelines dictate Rails with Trails facility design. Locally, the Luzerne County National Recreation Trail in Pittston is an example of a Rails with Trails system.

Although Rails with Trails are currently operating along train corridors of varying types, speeds, and frequencies, there simply is no consensus on an appropriate setback recommendation. Thus, an analysis of technical factors relating to setback distance should include the following factors:

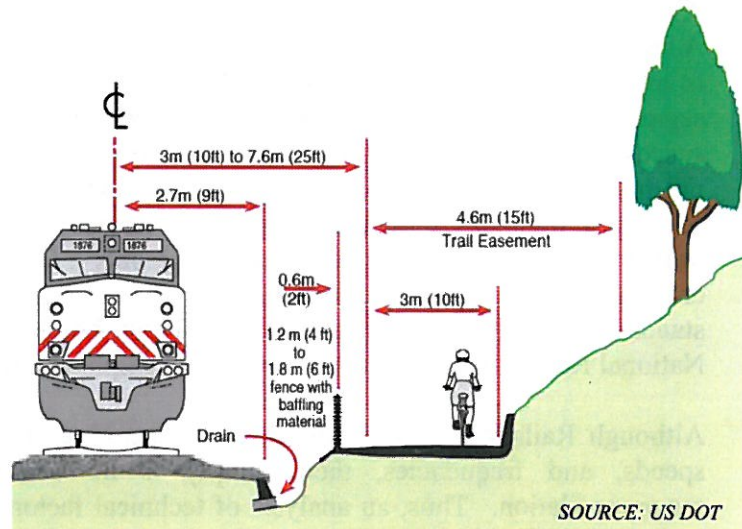
- Type, speed, and frequency of trains in the corridor
- Separation technique
- Topography
- Sight distance
- Maintenance requirements
- Historical problems

In the case of the Kingston Area Trail, the adjacent active rail line is a spur which is used by slow moving trains on an infrequent basis. Neither topography nor sight distance appear to be a problem along the proposed section of trail. Under similar conditions, some trails are located as close as 10 feet from the track centerline. However, this minimum setback would require vertical separation or techniques such as fencing or walls to provide a safety barrier between the trail and the rail. Based upon the current Luzerne County GIS Parcel Data, it appears that the width of the railroad property varies in width from 45 feet to 60 feet. Where ever possible, a minimum setback of 20 feet between the track centerline and the edge of the trail should be maintained.

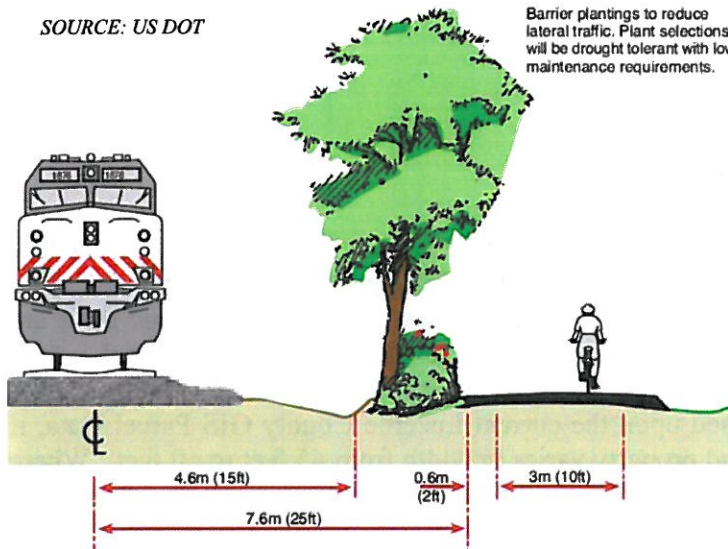
More than 70 percent of existing Rails with Trails utilize fencing and other barriers (*vegetation, vertical grade, walls, and/or drainage ditches*) for separation from adjacent active railroads and other properties. Fencing style varies considerably from chain link to wire, wrought iron, vinyl, steel picket, and wooden rail. To follow are some examples of buffer configurations from the U.S. Department of Transportation publication *Rails-with-Trails: Lessons Learned. Literature Review, Current Practices, Conclusions:*



**Figure 7-2:** Minimum Recommended Rails with Trails Setback.

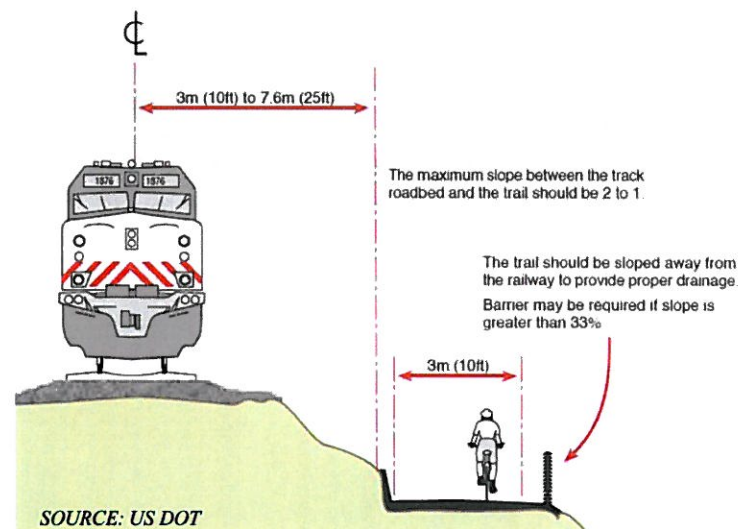


SOURCE: US DOT



**Figure 7-3:** Example of Use of Vegetation for a Buffer Between Trail and Active Rail Line.

**Figure 7-4:** Minimum Recommended Rails with Trails Setbacks Along a Fill Section.





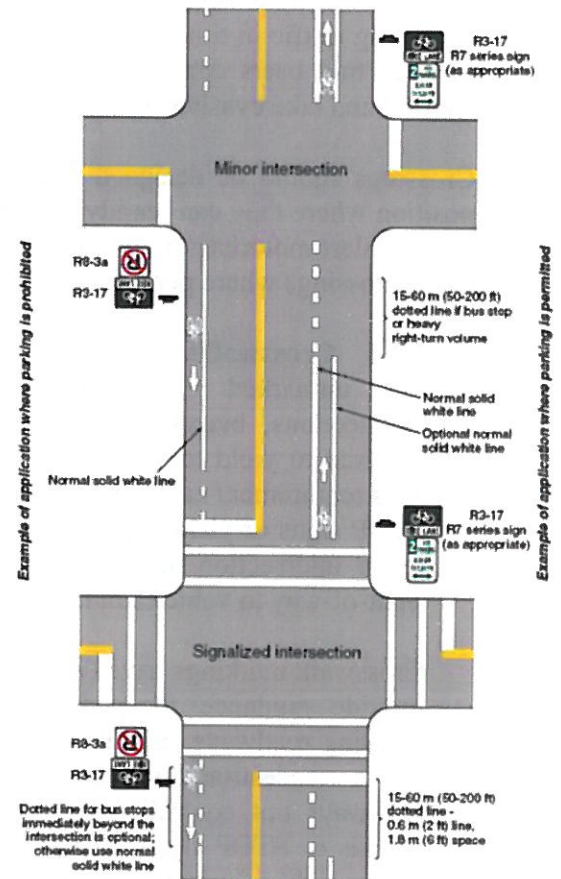
### 7.1.4 Sidewalks

Existing sidewalks will be used for several trail segments in urban areas. Where feasible, improvements should be made to increase the sidewalks to a minimum of 6 feet wide. All sidewalk improvements should include compliance with ADA requirements.

### 7.1.5 Bike Lanes

Cyclists should be discouraged from riding on the sidewalk. In conjunction with upgrades to the existing sidewalks, where feasible, bike lanes should be designated on the adjacent roadway to allow for safe cycling. Detailed traffic studies will be needed to determine the suitability of existing roadways for bike lanes. In some cases, road improvements may be required to accommodate these lanes.

**Figure 7-5:** Example of Pavement Markings for Bicycle Lanes on a Two-Way Street  
Source: US DOT



**Photo 7-1:** Bicycle lane in an urban setting with curbside parking.



## 7.2 Trail Intersections

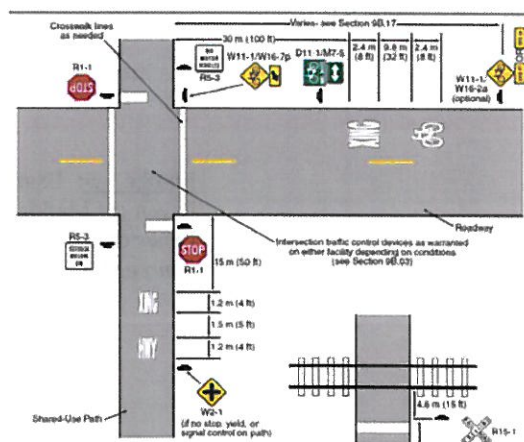
The overarching goal is to design road and trail intersections that minimize risk for both trail users and motorists. Sight distance is probably one of the most important considerations when designing a trail/roadway intersection in order to provide the greatest amount of advance warning for motorists and trail users. A motorist must be able to see a trail user preparing to cross a roadway in time to yield or take evasive action. Likewise, trail users must be able to see oncoming traffic in time to safely cross a roadway. Although not always possible, having a clear view of trail users approaching an intersection will allow a motorist to recognize a potential conflict and take evasive action if the trail user, especially a bicyclist, darts out into the roadway.

Crossings should be designed to be perpendicular to the roadway so trail users will be in a position where they can readily see approaching traffic from both directions. Warning signs are used to alert motorists to the presence of a crossing ahead. They are especially effective at mid-block crossings where pedestrians and trail users are not anticipated.

### 7.2.1 Crosswalks

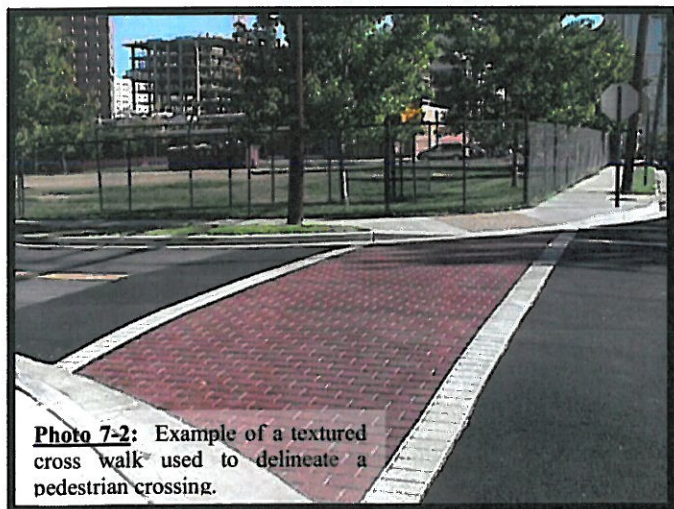
At unmarked or uncontrolled trail intersections, bicyclists and pedestrians are required to yield to vehicles in the roadway. This requirement can be reinforced by placing STOP signs or yield signs on a trail approach to an intersection to specifically assign the right-of-way to vehicles in the roadway.

Crosswalk markings have two functions: 1) to provide guidance for pedestrians who are crossing roadways, and 2) to alert road users of a pedestrian crossing point across roadways not controlled by highway traffic signals or STOP signs. If there is a need to assign right-of-way to trail users, STOP signs or YIELD signs and appropriate pavement marking should be used in conjunction with a marked crosswalk.



**Figure 7-6:** Example of Signing and Markings for a Multi-Use Trail / Roadway Crossing.

Source: US DOT



**Photo 7-2:** Example of a textured cross walk used to delineate a pedestrian crossing.

Recent traffic safety studies have concluded that marked crosswalks without other safety improvements should not be used under the following conditions:

- Where the speed limit exceeds 40 mph.
- On a roadway with four or more lanes without a raised median or crossing island that has (or will soon have) an ADT of 12,000 or greater.
- On a roadway with four or more lanes with a raised median or crossing island that has (or will soon have) an Average Daily Traffic of 15,000 or greater.

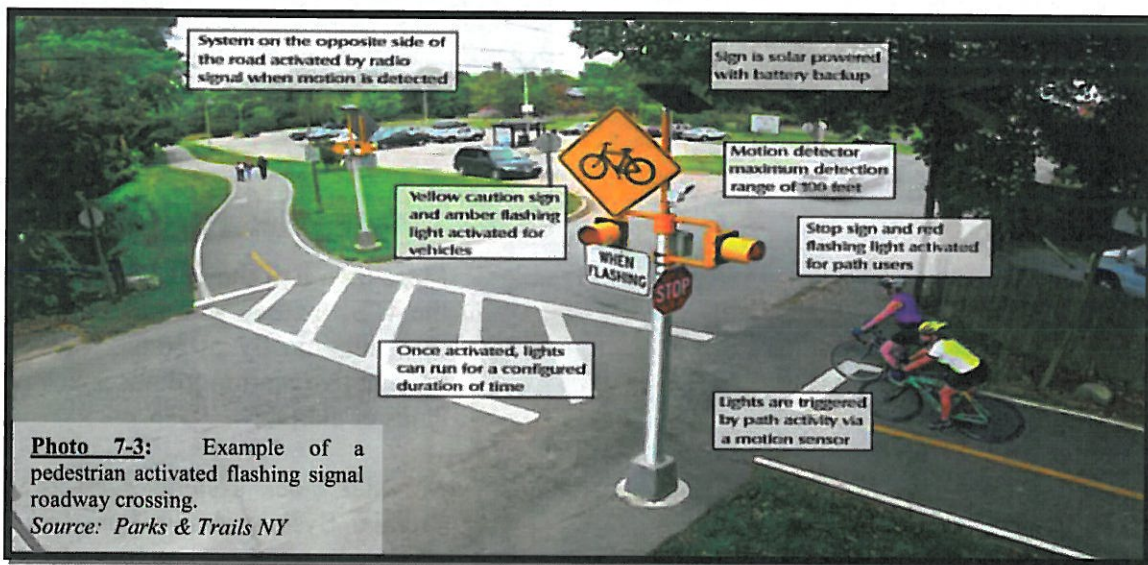


### 7.2.2 STOP Signs / Traffic Lights

If trail users need to wait for long periods of time before acceptable gaps in traffic occurs, they will take greater risks by attempting to cross during unacceptable gaps. When the volume of vehicular traffic becomes so great that trail users have difficulty crossing the roadway, consideration should be given to assigning right-of-way to trail users. Assignment of right-of-way to trail users should also be considered when there are large volumes of trail users. Greater numbers of trail users increases the exposure to risk, even under normal traffic conditions. In addition, larger queues occur at crossings which increase the risk by having larger numbers of trail users crossing at the same time. Right-of-way can be assigned with the installation of a STOP signs or a Traffic Signal. Traffic Signals have an advantage over STOP signs in that it alternates right-of-way allowing less of an impact on the roadway capacity. Pedestrian-actuated signals can be installed to allow the signal to change right-of-way only when actuated. Traffic studies should be completed before these devices are used to assure that the capacity of the roadway is not unduly affected.

### 7.2.3 Flashing Signals (Cross Alert)

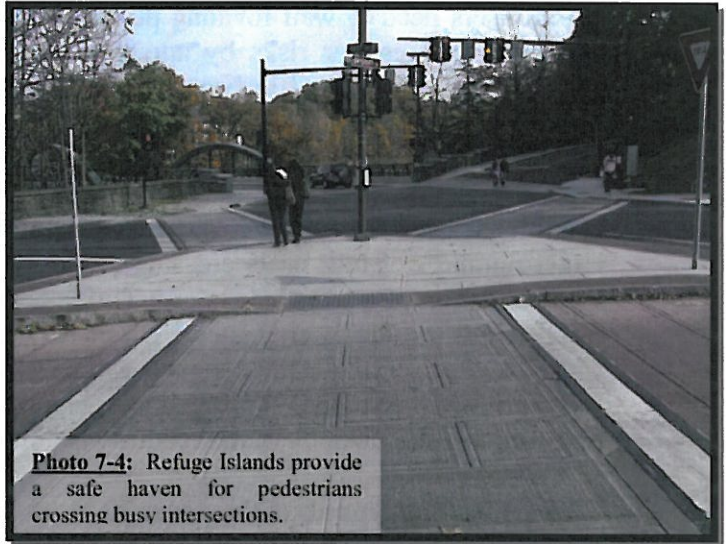
A new warning system for trail crossings that is gaining popularity is a system of lights that is activated when trail users approach a sensor mounted on the system at a roadway crossing. The system consists of a red LED light and STOP sign on the trail for trail users and an amber, or yellow, Light Emitting Diode light and warning sign on the roadway to warn motorists. The system was designed not to alter the flow of vehicular traffic, but to only forewarn oncoming vehicles that trail users are near or in the crosswalk.





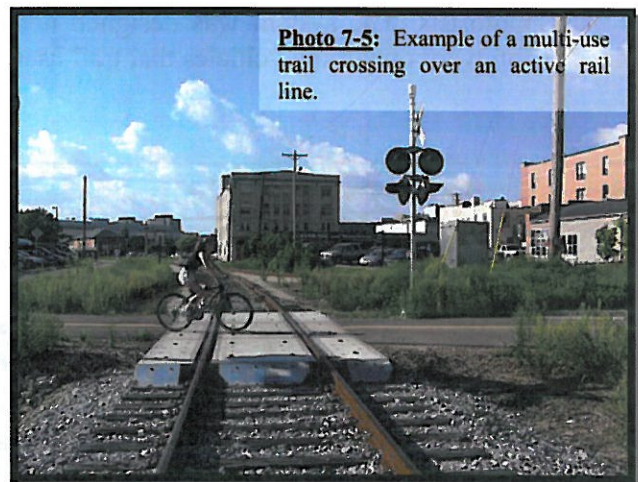
#### 7.2.4 Refuge Islands

The task of crossing multiple lane roadways or even high volume two-lane roadways can be made much simpler and safer by providing a pedestrian refuge island in the middle of the road. The refuge island, should be a minimum of six feet wide to allow the complete length of a bicycle to be within the refuge area. The crossing area in the refuge island should be slightly skewed towards oncoming traffic. This configuration will allow a trail user to focus their attention on oncoming traffic.



#### 7.2.5 Rail Crossings

The point at which trails cross active tracks is the area of greatest concern to railroads, trail planners, and trail users. Railroad owners, the FRA, and State DOTs have spent years working to reduce the number of at-grade crossings in order to improve public safety and increase the efficiency of service. The railroad company or agency, and State DOT or Public Utility Commission, will need to approve any new crossings, the design of which must be in compliance with the relevant regulations.



More than half the existing RWTs in the U.S. include some sort of track crossing, mostly at-grade. Several have active warning devices such as gates or alarms.

Modular block systems such as the Premier System shown here can be used to create a stable railroad crossing.

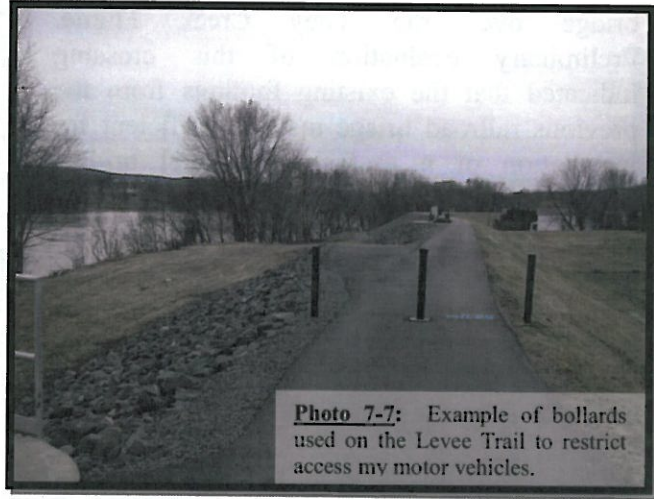


## 7.3 Auxiliary Structures

### 7.3.1 Barriers and Emergency Access

With the exception of maintenance, police, and emergency vehicles, motor vehicles are prohibited from multi-use trails. A ten-foot wide multi-use path is wide enough to be easily mistaken as a driveway or a street to the motorist, and vehicles can erroneously or deliberately enter a trail.

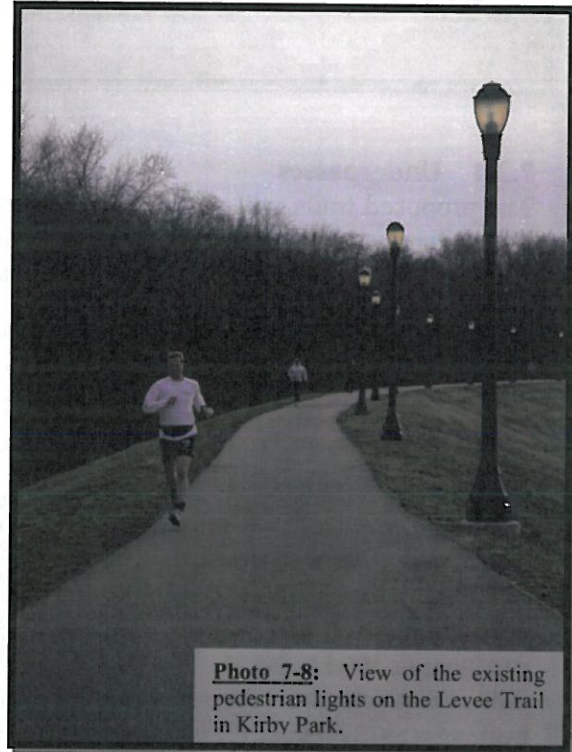
The use of barriers at the entrance to a trail with a separate means of access for authorized vehicles is routinely used by trail designers. The barrier usually consists of a series of bollards spaced approximately five feet apart to allow a bicycle with a trailer or a wheelchair to pass through. Authorized vehicle access is often accommodated through a separate gate or by removing the center bollard. This type of barrier treatment effectively eliminates all motor vehicles except ATVs.



**Photo 7-7:** Example of bollards used on the Levee Trail to restrict access by motor vehicles.

### 7.3.2 Pedestrian Lighting

Trail lighting in this area is currently limited to the Levee Trail in the area of Kirby Park. All other trail systems are currently unlit. For safety, it is recommended that all new trail intersections be lit using either standard pole mounted streetlights or self-standing light poles similar to the ones in Kirby Park.

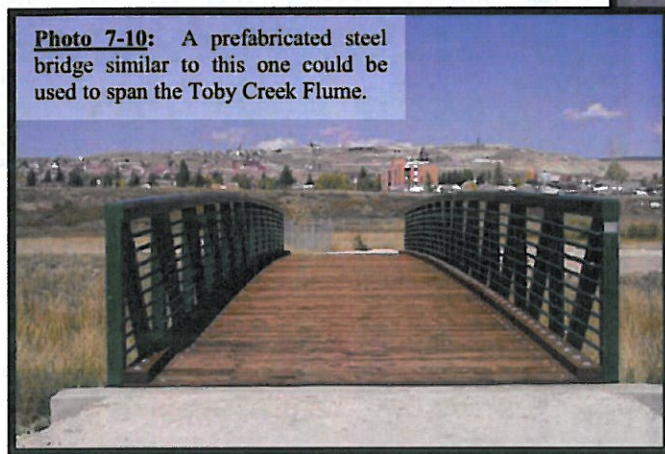


**Photo 7-8:** View of the existing pedestrian lights on the Levee Trail in Kirby Park.

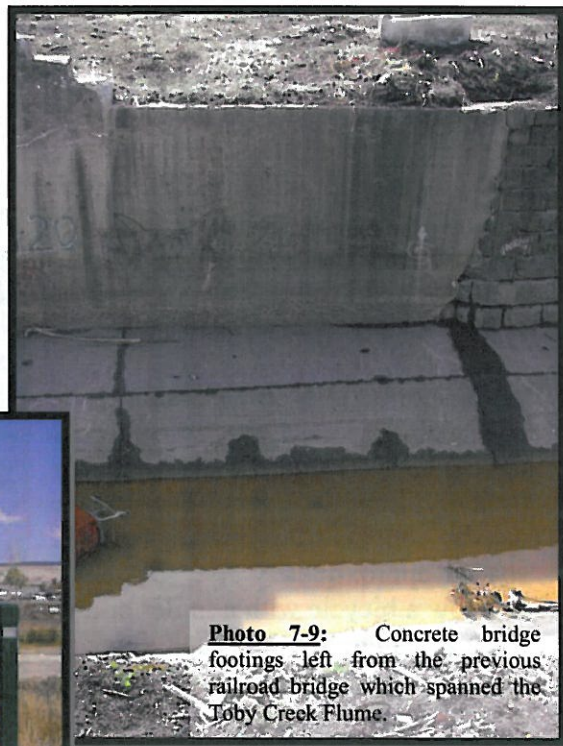


### 7.3.3 Bridges

As currently proposed, the Kingston Area Trail will require the construction of a pedestrian bridge over the Toby Creek Flume. Preliminary evaluation of this crossing indicated that the existing footings from the previous railroad bridge may be sufficient for installation of a prefabricated steel bridge. Additional engineering studies will be required to assure the structural stability of this structure.



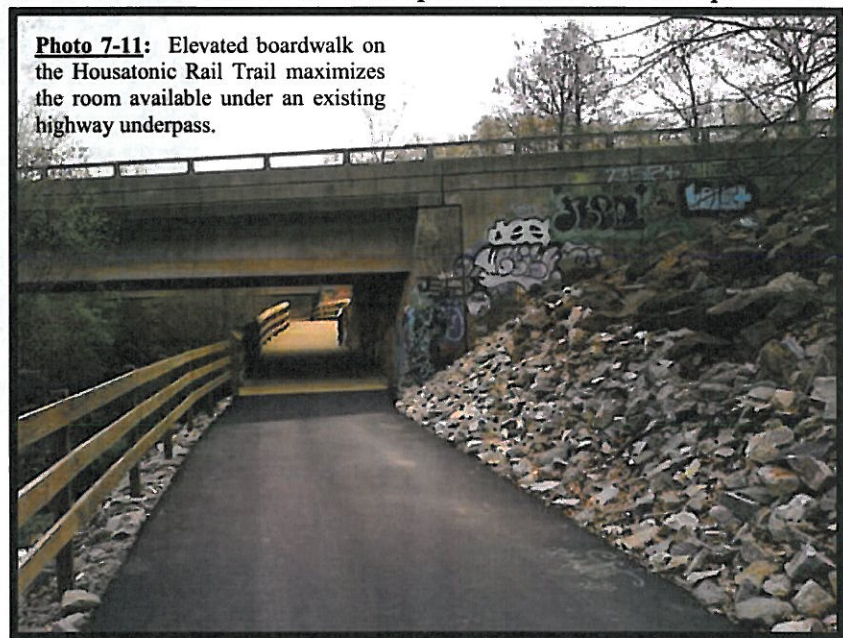
**Photo 7-10:** A prefabricated steel bridge similar to this one could be used to span the Toby Creek Flume.



**Photo 7-9:** Concrete bridge footings left from the previous railroad bridge which spanned the Toby Creek Flume.

### 7.3.4 Underpasses

The proposed trails will pass under US Route 309 in three locations. In each case, the trail will utilize existing underpasses. In two cases, the railroad underpass near the Vaughn Street Playground and the Evans Street Underpass, space for the proposed trail will be limited. Therefore, the trail will have to abut the side of the underpass to maximize the space. In these areas, an elevated boardwalk, similar to a system used on the Housatonic Rail Trail in Monroe, Connecticut may be desirable. Not only will this system maximize the distance between the trail and the roadway or tracks, but it will also elevate the trail.



**Photo 7-11:** Elevated boardwalk on the Housatonic Rail Trail maximizes the room available under an existing highway underpass.



## 7.4 Trail Signage

Each of the existing trail systems in this area has its own distinctive style of signs. As part of the final design of this trail system, a comprehensive signage plan should be developed to tie together the various sign styles and format.





## 7.5 Accessibility

Everyone should have the opportunity to experience and enjoy the outdoors. To the maximum extent feasible, trails should be designed to accommodate the access needs of all designated users. Considering accessibility when designing trails and installing accessible built facilities such as ADA compliant restrooms, handicapped parking at Trail Heads, and lowered drinking fountains will permit more people to enjoy the outdoors. In addition, providing detailed information about existing path conditions and available facilities can help visitors select trails. Such trail information reduces the likelihood that a trail user will become stranded or endangered and can improve safety and visitor enjoyment.

Because trails are transportation and recreation facilities, accessibility is mandated by the federal Americans with Disabilities Act of 1990 (ADA), which requires certain design standards for facilities to be in compliance with the law. ADA compliance is important to keep in mind as a trail enters the design and construction phases. On October 19, 2009 the United States Access Board published the Draft Final Accessibility Guidelines for Outdoor Developed Areas to establish accessibility guidelines pursuant to the Architectural Barriers Act (ABA). Requirements proposed under these guidelines for Accessible Trails included:

**Surface** - The surface of trails and their related passing spaces and resting intervals shall be firm and stable.

**Clear Tread Width** - The clear tread width of trails shall be 36 inches minimum.

**Passing Spaces** - Trails with a clear tread width less than 60 inches shall provide passing spaces at intervals of 1000 feet maximum.

**Obstacles** - Tread obstacles on trails and their related passing spaces and resting intervals shall not exceed ½ inch in height measured vertically to the highest point.

**Slopes** - No more than 30 percent of the total length of a trail shall have a running slope steeper than 1:12. The running slope of any segment of a trail shall not be steeper than 1:8.

**Cross Slope** - Where the surface is concrete, asphalt, or boards, the cross slope shall not be steeper than 1:48. Where other trail surfaces are used, the cross slope on other surfaces shall not be steeper than 1:20.

**Trail Signs** - Trail signs should include the following information:

- Length of the trail or trail segment
- Surface type
- Typical and minimum tread width
- Typical and maximum running slope
- Typical and maximum cross slope

Typically, problems in complying with ADA requirements for a trail design arise due to steep slope issues. However, since much of this proposed trail system is located within existing road right-of-ways and rail grades, steep slopes are not as much of a design issue as they would be in a natural landscape. Therefore, it is anticipated that with well thought-out design, the entire Greater Kingston Area Trail System can comply with ADA regulations.



## Chapter 8: Trail Operation, Maintenance and Security

### 8.1 Ownership/maintenance/management options

The Steering Committee was presented with the following potential organizational structure options:

#### 1. Formation of a Non-Profit Organization

A non-profit organization could be formed that would have by-laws, officers, board members, etc. This entity would likely begin as an all volunteer member organization with no paid staff. The primary disadvantage to forming a non-profit is that there is more state (PADCNR) funding available for municipal entities than for non-profits. The state programs for park and recreation are currently being reduced and the competition for state grants is increasing, thereby putting non-profits at a disadvantage. An advantage to the formation of a new non-profit structure is that a non-profit organization may be more likely to receive funding from local and regional foundations. However, the largest source of funding for trail and park development is still the Commonwealth of Pennsylvania. Rather than form a new non-profit organization, the Greater Kingston Trail could be developed by an existing trail organization in Luzerne County such as the Anthracite Scenic Trails Association, Susquehanna Warrior Trail Council or the West Side Trail Commission.

#### 2. Creation of an Authority

The Municipality Authority Act of 1945 authorizes the creation of municipal authorities (termed joint authorities) by two or more local governments (Intergovernmental Cooperation Handbook, Pennsylvania Department of Community and Economic Development, 1997). Joint authorities are most commonly used when major capital investments are necessary (i.e. sewage treatment, water supply, airports, bus transit systems and in some cases recreation). Joint Authorities **cannot** include members from non-profit organizations.

Advantages to creating an authority include: 1) Under the Municipalities Authority Act, authorities may sell bonds, receive grants, acquire property, sign contracts and take similar actions and; 2) Authorities are autonomous from local government thereby able to focus on a single recreational function (i.e. pool, indoor facilities).

Some disadvantages to creating an authority include: 1) Joint authorities must be governed by board members who are appointed by elected officials of the member municipalities and often elected officials are not appointed to sit on the authority boards so a break down in communication occurs between the authority board and the member municipalities; 2) Municipalities have no control over the authority and conflicts may arise between the authority board and the member municipalities; and, 3) Recreational authorities often have difficulty generating adequate funding and therefore must either end up reducing services, looking for local support or negotiating for increased funding from the municipalities that created them which is often not successful due to a lack of municipal involvement in the authority or break down in communications.

Currently there are ninety-three (93) recreational authorities as compared to over 1,600 sewer and water authorities in Pennsylvania. Currently 41% of recreational authorities are inactive and most were created in the 1950's and 1960's (unofficial documentation by PADCNR).



### **3. Creation of a Commission**

In 1972, the General Assembly enacted the Intergovernmental Cooperation Law to implement the provisions of Article IX, Section 5 of the new Pennsylvania Constitution, the Intergovernmental Cooperation Provision (Intergovernmental Cooperation Handbook, Department of Community and Economic Development, 1997). The Act, commonly referred to as Act 180, states, “A municipality may cooperate or agree in the exercise of any function, power or responsibility with one or more municipalities” (Act 180, Section 4). As in the case of the authority a non-profit organization **cannot** be a member of a commission. Likewise, the steering committee could elect to create a commission with the interested municipalities.

The language of Act 180 is very broad. If a municipality has the power to take an action or deliver a service under the provisions of its code or charter, it has the power to cooperate with other municipalities and non-profit organizations in doing so by forming an entity such as a commission. The exercise of this power is the responsibility of the municipal governing body (Intergovernmental Cooperation Handbook, PA Department of Community and Economic Development, 1997). Required features of an intergovernmental cooperation agreement are outlined in the handbook.

Under Act 180, the steering committee may enter into an intergovernmental agreement and create a commission. The creation of a commission would provide far more flexibility than an authority and allow the municipalities and other members to dictate their own terms.

Additionally, Growing Greener monies were appropriated for only five years. Each year the monies available from Growing Greener are decreasing. Currently, a larger portion of the available funding is set aside for municipalities rather than for non-profit organizations. A commission would have a greater potential for receiving funding than a non-profit organization or an individual municipality.

Additionally, if there is no new appropriations for Growing Greener, a non-profit as a 501(c)(3) will not be eligible to apply for grants under the Keystone Grant Program whereas a commission would be.

PADCNR has assisted in the creation of 18 of 48 existing regional park and recreation organizations in Pennsylvania.

### **4. Creation of a Council of Governments**

Act 180 also provides for the creation of a Council of Governments (COG). A COG differs from a commission and other ACT 180 agreements in the following ways:

- A COG has broad responsibility and may study and propose new joint programs and projects and coordinate other municipal activities rather than oversee one specific project;
- Multiple existing or proposed ACT 180 agreements among COG municipalities can be included under a COG;
- No specific program must be undertaken;
- A COG board or council is almost always composed of elected officials; and
- Either elected or appointed officials may oversee other Act 180 programs.

The creation of a COG could be the next step after the creation of a recreation commission. If the participating municipalities felt that other agreements under Act 180 might useful and



wanted to expand their partnering activities among the municipalities, then the creation of a COG might be beneficial.

#### **5. Ownership by the ASTA, SWTC and/or WST**

The preferred alignment of the Greater Kingston Area Trail/Greenway indicates connections to three existing trails (Back Mountain Trail, Susquehanna Warrior Trail, and the West Side Trail). It is possible that the Anthracite Scenic Trails Association (ASTA), the Susquehanna Warrior Trail Council (SWTC) or the West Side Trail Commission (WST) and could be the lead entity(s) to develop all or portions of the Greater Kingston Area Trail/Greenway system. All three organizations strongly support the development of the Greater Kingston Area Trail/Greenway and may be willing to undertake the development and operation and maintenance of all or portions of the Greater Kingston Area Trail/Greenway. However, all three entities indicated that their trails are not completely constructed and their priorities at this time are to finish the remaining sections of their respective unconstructed trails.

### **8.2 Trail Maintenance**

An ongoing maintenance and improvement program will ensure that the entire trail system is kept in optimal condition, and meets or exceeds existing standards. Landscaped areas along the trail will require some periodic maintenance, but good design can keep this to a minimum. Low maintenance and drought resistant trees, shrubs, and ground covers can also minimize upkeep activities. Like all transportation improvements, trail systems require funding and staff time for maintenance. Fortunately, several strategies and funding programs are available to reduce the burden to local agencies. Hundreds of trails around the state provide examples of successful management and maintenance strategies.

While trail ownership and maintenance are closely correlated, it is also common for a trail to be owned by a government entity but maintained by volunteers. This is a win-win relationship. Most nonprofit trail groups avoid owning land due to liability concerns. The government, which has much more wherewithal to address legal issues, takes ownership in exchange for low-cost maintenance. This set-up is also beneficial in disaster situations such as hurricanes, since trails held by private nonprofits may not qualify for federal disaster aid. Nonprofit trail groups participate in the maintenance of more than three times as many trails as they own. This core group of volunteers are further augmented by scouts, community groups, persons sentenced to community service and others. A similar pattern can be seen in the payment for maintenance, where trail groups fund a significant share of maintenance through membership dues, donations, fundraising events, and local business and foundation grants, even though government entities actually own the trail.

Table 8-1 provides a list of typical trail maintenance tasks, both routine and periodic which can be anticipated for the proposed trail system. It is assumed that all bike lanes and improved sidewalks will be maintained by the entity which currently maintains that roadway.



**TABLE 8-1:** Typical trail maintenance tasks and anticipated frequency.

<b><u>TASK</u></b>	<b><u>FREQUENCY</u></b>
<b>TRAIL SURFACE</b>	
Asphalt Trail	
Repaving	15 years
Coating or sealing	5 years
Crack Sealing	Annual
Pavement markings maintenance and replacement	Annual
Pothole repair	Annual or As Required
Snow removal	As Required
Surface cleaning	Quarterly
Crushed Stone Trail	
Resurface	As Required
Re-Grading	Annual
Pothole repair and other patches	Annual or As Required
Snow removal	As Required
Surface cleaning	Quarterly
<b>LANDSCAPING</b>	
Keep trail-side land clear of trash and debris	Weekly
General maintenance of trailheads (litter clean-up, etc.)	Weekly
Mowing	Weekly (in season)
Leaf removal	Monthly (in season)
Tree pruning	Annual
Tree removal	Annual
Invasive species removal	Biannual
Planting new vegetation	Biannual
Application of herbicides or pesticides	Biannual
Clearing of drainage channels and culverts	Annual or As Required
Surface maintenance of parking areas	Annual or As Required
Landscaping/gardening at trailheads	Biannual
<b>FACILITIES &amp; STRUCTURES</b>	
Empty trash cans at trailheads and along trail	Weekly
Maintenance of stationary toilets at trailheads (clean, empty, etc.)	Weekly
Maintenance of portable toilets at trailheads (clean, empty, etc.)	Weekly
Maintenance of informational kiosks (repairs, etc.)	Annual or As Required
Maintenance of picnic tables, benches, etc.	Annual or As Required
Updating information in informational kiosks	Monthly
Repair/maintenance of signs	Annual or As Required
Maintenance of pavement markings	Annual
Patrols by police agency	Daily
Patrols by non-police agency (e.g. trail watch)	Daily
Recovery from illegal acts such as dumping and vandalism	Weekly
Maintenance of lighting	Quarterly
Maintenance of gates, bollards and fencing	Annual or As Required
Bridge, underpass and crossing inspection	Annual
Bridge redecking	As Required
Paint/stain/treat bridge deck or structure	As Required
General bridge maintenance	Annual
General underpass maintenance	Annual
Railroad grade crossing maintenance	Annual
Road grade crossing maintenance	Annual



### 8.3 Trail Security

Although studies show that rail-trail crime is rare, it is nonetheless a legitimate concern for residents and trail users and should be treated accordingly. There are several methods for addressing such concerns and minimizing the potential for crime. Encouraging trail use is one way to help ensure trail safety, as the presence of other users helps to minimize undesirable behavior. In addition, trail users should exercise common sense when using trails after dark and remain aware of their surroundings at all times. Several other mitigation strategies help suppress criminal behavior and lessen the impact of incidents that do occur. In particular, trail design features and trail patrols are useful to keep in mind and recommendations for their implementation are included in this section. However since every rail-trail environment is unique, trail managers should assess the need for these strategies on an individual basis.

Good trail design is an effective way of promoting trail safety. In most cases, the design of the trail should eliminate overgrown vegetation and tall shrubs in order to minimize hiding places along the trail and maintain long sight lines for users. Trail managers may also choose to place security lighting at trail heads and in parking lots to improve trail safety. Emergency phones or call boxes and emergency vehicle access are also important safety features for some trails. Additionally, keeping all trail corridors clean and well maintained increases the feeling of community ownership of the trail and reduces the incidents of minor crime such as litter, graffiti and vandalism. Prohibiting motorized use of the trail deters property crime.

Two-thirds of trails report vandalism of their signs, including graffiti, damage and theft. You should expect this to happen and be prepared. Here are some tips for combating vandalism:

- Repair or replace vandalized signs quickly to send a message that vandals will not deter the trail effort.
- Anchor signs and sign posts securely.
- Use materials less subject to vandalism, such as metal versus wood posts.
- Limit signs in remote areas or other areas where vandalism is a concern.
- Cover unique or intricate signs with Lexan to protect them from direct contact.

### 8.4 Proposed Roles of the Public and Non-Public Agencies

The preferred alignment of the Greater Kingston Area Trail/Greenway indicates connections to three existing trails (Back Mountain Trail, Susquehanna Warrior Trail, and the West Side Trail). It is possible that the Anthracite Scenic Trails Association (ASTA), the Susquehanna Warrior Trail Council (SWTC) or the West Side Trail Commission (WST) and could be the lead entity(s) to develop all or portions of the Greater Kingston Area Trail/Greenway system. All three organizations strongly support the development of the Greater Kingston Area Trail/Greenway and may be willing to undertake the development and operation and maintenance of all or portions of the Greater Kingston Area Trail/Greenway. However, all three entities indicated that their trails are not completely constructed and their priorities at this time are to finish the remaining sections of their respective unconstructed trails.

During the public participation process of developing this Master Plan for the Greater Kingston Area Trail/greenway, the local municipalities expressed support for the creation of the trail. However, the local municipalities did not indicate a strong interest in becoming a lead entity for the development and operation and maintenance of the trail system.



Luzerne County is in the process of completing a Feasibility Study regarding the potential formation of a recreation authority that would possibly oversee the operation and maintenance of large regional parks and large trail/greenway systems located in Luzerne County. The potential exists for Luzerne County to provide in-kind services and/or financial support to the various trail managing entities including support for the long term operation and maintenance of the Greater Kingston Trail/Greenway system. Given the current economic challenges facing Luzerne County and the region, support from the County may not be available for the near future. Therefore, several trail organizations in Luzerne County, including ASTA, the Earth Conservancy, the Greater Hazelton Rails to Trails, Susquehanna Warrior Trail and the West Side Trail Commission have begun working together to determine what promotion, operation and maintenance activities can be accomplished cooperatively.

The Lackawanna Valley Heritage Authority has also begun to look at the possibility of organizing municipal entities and non-profit trail organizations in Northeastern Pennsylvania in order to coordinate trail development, promotion, operation and maintenance on a regional basis. A series of meetings will be held in 2010 to further discuss future partnering options/activities.

### 8.5 Areas for in-kind contributions from involved entities

Table 8-2 below lists tasks which are commonly completed by Volunteer Groups as in-kind contributions for Trail Maintenance.

**TABLE 8-2:** Common Maintenance Tasks for Volunteers.

VOLUNTEERS CAN MOST LIKELY...	VOLUNTEERS MAY NOT BE ABLE TO...	TO GET HELP WITH THIS TASK...
Keep the trail clear of trash and debris.	Haul material to a disposal facility.	Contact your local government or waste hauler.
Clear brush and trees.	Dispose of the material.	Borrow or rent a chipper.
Plant and maintain trees, shrubs and flowers and do most gardening and landscaping tasks.	Provide the items to be planted.	Get donated or discounted plant materials from a local nursery or home center. Establish an inventory of donated hand tools.
Operate mowers, trimmers and chain saws.	Supply their own tools.	Establish an inventory of donated power tools.
Operate a tractor, loader or bobcat.	Operate specialized heavy equipment like a dozer, grader or roller.	Ask your local road crew or hire a paid contractor.
Make minor repairs to non-asphalt trails.	Lay asphalt or operate a paving machine.	
Keep drainage structures clear.	Dig a trench and install pipes or culverts.	
Perform surface cleaning of restrooms.	Remove waste from portable toilets and restrooms.	Hire a paid contractor.
Install signs, gates, bollards and fences.	Manufacture same.	Purchase using donated funds, or get donated or discounted materials from a lumber yard or home center.
Build and install picnic tables, benches, kiosks and other wood structures.	Provide materials.	
Bridge decking and minor bridge and tunnel maintenance.	Structural inspection and maintenance of bridges and tunnels.	Hire a professional engineer and paid contractor.

Source: RTC - "Rail-Trail Maintenance: Preparing for the Future of Your Trail"



## Chapter 9: Financial Feasibility Analysis

### 9.1 Land acquisition or easements required for proposed trail system

The proposed trail system has been designed to take advantage of existing publicly owned parcels and right of ways. Many of the proposed trail alignments run within abandoned railroad right-of-ways which are currently owned by the Redevelopment Authority of Luzerne County. Therefore, the need to acquire easements from private land owners has been significantly reduced. Although agreements will be needed with each of the public entities involved, the acquisition of right of ways for the proposed trails will be much easier than if they were running through privately owned parcels. The exception to this statement is the Larksville Connector Trail which predominantly travels through privately owned parcels.

Depending upon the property owner's willingness to work with the trail developers and the size of the property involved, there are numerous methods in which to cross a privately owned parcel with a public trail. In some cases, landowners may be willing to donate smaller properties to a 501C3 non-profit group to take advantage of Income Tax deductions, in other cases it may be necessary to purchase the property. Some of the more common methods for acquiring land for a public trail are outlined below:

**Purchase:** Land can be purchased outright by either a nonprofit or a public entity. This option may be the simplest, but it can prove costly.

**Land Donations:** A landowner can donate property to an agency or organization. Tax credits may be available for land donated for conservation purposes.

**Bargain Sale:** Sale of a property at less than the fair market value. The difference between a bargain sale price and fair market value often qualifies as a tax-deductible charitable contribution. You can use this method to avoid high capital gains taxes.

**Easements:** A landowner may grant a trail easement to a nonprofit organization or government to allow the nonprofit or government to construct or maintain a public trail on the private property. By donating or selling a trail easement, a landowner may provide their land for a public trail without having to subdivide the land or lose ownership and control of the land. The easement may address matters such as:

- Trail width and facilities
- Pathway Material
- Permitted Uses and Hours for Use
- Liability

**Land Lease:** In these cases, the land is rented from the landowner for a set amount of time. Leases can come from a variety of sources, including railroads, utility companies and public entities.

**Access and Use Agreements** Access and use agreements between a land owner and a greenway or trail operator specify how a portion of a property may be used. A landowner, for instance, may permit a hiking trail to be developed on his or her property but continue to use the property for forestry or farming. A landowner who opens his or her land for recreational use, without charging a fee is protected from liability by the Pennsylvania Recreational Use



of Land and Water Act of 1994 (Pa. Stat. Ann. Tit. 68, §§ 477-1 to 477-8) and supporting case law. The landowner may also be indemnified under a greenway or trail organization's insurance program.

Table 9-1 below contains detail about each of the properties which the proposed trail will cross. Due to the preliminary nature of this study, private property owners have not yet been contacted to discuss their willingness to participate in the project. However, two meetings with the Redevelopment Authority of Luzerne County have confirmed the Authorities willingness to participate in this trail project.

**Table 9-1. Trail Easements required for proposed trail system**

<u>Property ID</u>	<u>Owner</u>	<u>Distance</u>	<u>Total Area (20' ROW)</u>
<b><u>Kingston Area Trail: Section I</u> - State Route 11 to Existing Levee Trail</b>			
38H9 00A00A000	PGW Co. Trustee	640 ft	0.29 acres
18H9 00A00B000	Redevelopment Authority of Luzerne County	2,875 ft	1.32 acres
<b><u>Kingston Area Trail: Section II</u> - Levee Trail to Main Street, Edwardsville</b>			
<i>This section of the trail will use the existing ROW for the Levee Trail</i>			
<b><u>Kingston Area Trail: Section III</u> - Main St., Edwardsville to Sharpe St., Kingston</b>			
34G9SE401423F00	Wyoming Seminary	900 ft	0.41 acres
34G9E401423E00	David Kovalchick	890 ft	0.41 acres
34G9 00A00A000	Square Deal Realty, Inc	1,500 ft	0.69 acres
34G9 00A0A1000	John Graham	980 ft	0.45 acres
<b><u>Kingston Area Trail: Section IV</u> - Sharpe Street to Flack Memorial Field</b>			
59F10 00A0B1000	Redevelopment Authority of Luzerne County	15,630 ft	7.18 acres
41G9 00A0A1000			
41G9 00A0A1000			
52G9 00A0A1000			
59F10 00A0B1000			
59F10 00A0B1000			
59F10 00A0B1000			
66E10 00A0A1000			
59F10 00A0B1000			
59F10 00A0B1000			
59F10 00A0B1000			
52G9 00A0A1000			
66E10 00A0A1000			
<b><u>Kingston Area Trail: Section V.</u> - Main St., Edwardsville to Sharpe St., Kingston</b>			
67F10 00A001000	Luzerne County Flood Protection Authority	2,000 ft	0.92 acres
67F10S1 005003000	Wyoming Historical & Geological Society	500 ft	0.23 acres
67F10S1 003029000			



**Table 9-1. Trail Easements (continued)**

<u>Property ID</u>	<u>Owner</u>	<u>Distance</u>	<u>Total Area (20' ROW)</u>
<b><u>Back Mountain Trail Extension</u></b>			
41G9NE1 010001000	Unknown	850 ft	0.39 acres
41G9NE1 01320B000	John A Connolly Jr.	140 ft	0.06 acres
41G9NE3 008003000	Dallas Area Municipal Authority	1,050 ft	0.48 acres
41G9NE3 007013000			
41G9NE3 00704B000	Charles R Heffron Jr.	155 ft	0.07 acres
41G9NE3 007004000	James Thomas Jr & John Thomas	115 ft	0.05 acres
41G9 00A0A1000	Redevelopment Authority of Luzerne County	5,300 ft	2.43 acres
34G9SE2 010022000	703 Rutter Ave Partners, LLC	320 ft	0.15 acres
34G9SE2 010016000			
34G9SE2 010015000	Kevin Hogan	90 ft	0.04 acres
34G9SE2 011015000	Lathrop Street Partners	245 ft	0.11 acres
34H9NW1 001001000	Kingston Borough	1,260 ft	0.58 acres
34G10SW4 002013000			
34G10SW4 001007000			
34G10 00A05A000	Wilkes Barre Connecting RR Co.	25 ft	0.01 acres
34G10 00A00E000	Delaware & Hudson Railway Company	570 ft	0.26 acres
<b><u>Larksville Connector Trail</u></b>			
38G9S4A 005025000	Larksville Boro Town Hall	65 ft	0.03 acres
38H9 00A017000	Scenic Development Corp	3,450 ft	1.58 acres
38H9S2 002003000	Justin P Curcio	115 ft	0.05 acres
38H9S2 002001000	T & M Transit Inc	560 ft	0.26 acres
38H9S2 002002000			
38H9 00A01C000	Heavy Media Inc	2,100 ft	0.96 acres
38H9 00A01E000			
38H8S5 00405B000	Shawnee Ready Mix Concrete Co	225 ft	0.10 acres
38H8S5 004005000	Robert J & Kathleen M Kachinko	150 ft	0.07 acres
38H8S5 004003000	Plymouth Property Real Estate, LLC	210 ft	0.10 acres
38H8S5 00402B000			
38H8S5 00405D000			
38H8S5 00402A000	Glen Carbonic Gas Co	30 ft	0.01 acres
38H8S5 00402C000			
38H8S5 004002000	Michael M Duda et al	120 ft	0.06 acres
38H8S5 00601A000	John & Anna Lech	235 ft	0.11 acres
38H8 00A00A000	D & H Railway Corp	350 ft	0.16 acres



**Table 9-1. Trail Easements (continued)**

<u>Property ID</u>	<u>Owner</u>	<u>Distance</u>	<u>Total Area (20' ROW)</u>
<b><u>Market Street Connector Trail</u></b>			
34G9SE4 01402B000	Brian J Price & Kelly A Martinez	12 ft	0.01 acres
34G9SE4 01423E000	David A Kovalchick	50 ft	0.02 acres
<b><u>Hopkins Memorial Park Connector Trail</u></b>			
End of Lawrence Street	UNKNOWN	635 ft	0.30 acres
34G9SE4 00123D000	Brian and July Selenski	160 ft	0.07 acres
34G9SE4 00123B000	Square Deal Realty, Inc.	165 ft	0.08 acres
<b><u>Schuyler Ave Playground Connector Trail</u></b>			
34G9 00A00A000	Square Deal Realty, Inc.	106 ft	0.05 acres
<b><u>Roosevelt Park Connector Trail</u></b>			
<i>All of the proposed trail alignment will be located within existing municipal right-of-way.</i>			
<b><u>Forty Fort Connector Trail</u></b>			
21G10NW1002024000	Forty Fort School District	220 ft	0.10 acres
21G10NW1010002000	Forty Fort Baseball for Boys and Girls	130 ft	0.06 acres
<b><u>O'Hara Park Connector Trail</u></b>			
59F9 00A014000	Forty Fort Baseball for Boys and Girls	215 ft	0.10 acres
<b><u>Seminary Place Connector Trail</u></b>			
<i>All of the proposed trail alignment will be located within existing municipal right-of-way.</i>			
<b><u>Luzerne County Park Connector Trail</u></b>			
21F10 00A008000	Wyoming Valley Airport	580 ft	0.27 acres
21F10 00A004000	County of Luzerne	3,250 ft	1.50 acres
21F10 00A005000			
21F10 00A006000			
21F10 00A007000			
<b><u>West Side Vo-Tech Connector Trail</u></b>			
52G9S1 004001000	West Side Area Vo-Tech School	520 ft	0.24 acres



## 9.2 Cost estimates for developing the trail and for proposed facilities

**Table 9-2. Cost estimates for developing the Kingston Area Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b>KINGSTON AREA TRAIL</b>				
<b>SECTION I - State Route 11 to Existing Levee Trail</b>				
<b><u>Pathway Surface</u></b>				
0.68 mile of 10' Crushed Stone trail	LF	3,590	\$25.00	\$89,750.00
<b><u>Structures</u></b>				
56'± Pedestrian Bridge over the Toby Creek Flume	EA	1	\$300,000.00	<u>\$300,000.00</u>
			Subtotal	\$389,750.00
<b>SECTION II - Levee Trail to Main Street, Edwardsville</b>				
<b><u>Pathway Surface</u></b>				
Existing 10' Pavement – <i>No Improvements Proposed</i>				\$0.00
<b><u>Auxiliary Facilities</u></b>				
Parking / Trail Heads				
Trailhead Parking -10 Spaces	LS	1		<u>\$12,000.00</u>
			Subtotal	\$12,000.00
<b>SECTION III - Main St., Edwardsville to Sharpe St., Kingston</b>				
<b><u>Pathway Surface</u></b>				
0.94 mile of 10' Crushed Stone trail	LF	4,963	\$25.00	\$124,075.00
<b><u>Intersections and Access Points</u></b>				
<b>Main Street – Edwardsville</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00
<b>Pringle Street</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00



**Division Street**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Auxiliary Facilities**

Trailhead Signage Kiosk - Hopkins Memorial park	Ea	1	\$3,000.00	\$3,000.00
			Subtotal	\$3,000.00

**SECTION IV - Sharpe Street to Flack Memorial Field**

**Pathway Surface**

2.96 miles of 10' Crushed Stone Trail	LF	15,630	\$25.00	\$390,750.00
			Subtotal	\$390,750.00

**Intersections and Access Points**

**Union Street**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Bennett Street**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Slocum Street**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Shoemaker Street**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00



**Durkee Street**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Hughes Street**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Owen Street**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Dennison Street**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Auxiliary Facilities**

Trailhead Signage Kiosk - Roosevelt Park, O'Hara Park, Frank Slapar Field, Flack Memorial Field	EA	4	\$3,000.00	\$12,000.00
			Subtotal	\$12,000.00

**Barriers and Emergency Access**

Six (6) Foot Chain Link Fencing Between Active Line And Trail	LF	15,300	\$25.00	\$382,500.00
Natural Buffers and/or Screening				\$0.00
			Subtotal	\$382,500.00

**SECTION V. - Flack Memorial Field to West Side Trail**

**Pathway Surface**

0.35 miles of 10' Paved Trail (if required by LCFPA)	LF	1,848	\$35.00	\$64,680.00
0.15 miles of 10' Crushed Stone Trail along Swetland Lane	LF	120	\$25.00	\$3,000.00
			Subtotal	\$67,680.00



**Intersections and Access Points**

**Park Entrance Driveway**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Wyoming Avenue**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

Grand Subtotal		\$1,470,155.00
Contingency	20%	\$294,031.00
Engineering		<u>\$352,837.20</u>
<b>GRAND TOTAL KINGSTON TRAIL</b>		<b>\$2,117,023.20</b>



**Table 9-3. Cost estimates for developing the Back Mountain Extension Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b><u>BACK MOUNTAIN TRAIL EXTENSION</u></b>				
<b><u>Proposed Design:</u></b>				
<b><u>Pathway Surface</u></b>				
2.14 miles of 10' Crushed Stone Trail	LF	11300	\$25.00	<u>\$282,500.00</u>
			Subtotal	\$282,500.00
<b><u>Structures</u></b>				
Pedestrian crossing adjacent to Vaughn Street Playground.	LS	1	\$5,000.00	<u>\$5,000.00</u>
			Subtotal	\$5,000.00
<b><u>Intersections and Access Points</u></b>				
<b><u>Buckingham Street</u></b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00
<b><u>Route 309 Off Ramp - No Signal Improvements Included</u></b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$6,000.00
<b><u>Route 309 On Ramp - No Signal Improvements Included</u></b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$6,000.00
<b><u>Mill Hollow Road</u></b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00
<b><u>Fulton Street</u></b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00



**Railroad Avenue**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Mercer Avenue**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Schuyler Avenue**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Wyoming Avenue**

Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	4	\$500.00	\$2,000.00
			Subtotal	\$2,000.00

**John Street**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Rutter Avenue**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Nandy Drive**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00



**Lathrop Street**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Hamilton Drive**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**3<sup>rd</sup> Avenue**

Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	\$800.00
			Subtotal	\$6,800.00

**Auxiliary Facilities**

Trailhead Signage Kiosk - Kingston Community Park	EA	1	\$3,000.00	\$3,000.00
			Subtotal	\$3,000.00

Grand Subtotal			\$386,100.00
Contingency	20%		\$77,220.00
Engineering			\$92,664.00
<b>GRAND TOTAL BACK MOUNTAIN TRAIL EXTENSION</b>			<b>\$555,984.00</b>



**Table 9-4. Cost estimates for developing the Larksville Connector Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b><u>LARKSVILLE CONNECTOR TRAIL</u></b>				
<b><u>Proposed Design:</u></b>				
<b><u>Pathway Surface</u></b>				
1.6 miles of 10' Crushed Stone Trail	LF	8450	\$25.00	<u>\$211,250.00</u>
			Subtotal	\$211,250.00
<b><u>Structures</u></b>				
Stream crossing adjacent to East Main Street and Nesbitt Street (if required)	LS	1	\$75,000.00	<u>\$75,000.00</u>
			Subtotal	\$75,000.00
<b><u>Intersections and Access Points</u></b>				
<b><u>Nesbitt Street</u></b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$6,800.00
<b><u>Route 11</u></b>				
Pedestrian Crossing Signal Warning	LS	1	\$20,000.00	\$20,000.00
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Balusters required to restrict access to trail	EA	4	\$200.00	<u>\$800.00</u>
			Subtotal	\$26,800.00
<b><u>Auxiliary Facilities</u></b>				
<b><u>Parking / Trail Heads</u></b>				
Trailhead Signage Kiosk -Romanoskey Park	EA	1	\$3,000.00	<u>\$3,000.00</u>
			Subtotal	\$3,000.00
Grand Subtotal				\$322,850.00
Contingency			20%	\$64,570.00
Engineering				<u>\$77,484.00</u>
<b>GRAND TOTAL LARKSVILLE CONNECTOR TRAIL</b>				<b>\$464,904.00</b>



**Table 9-5. Cost estimates for developing the Market Street Connector Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b><u>MARKET STREET CONNECTOR TRAIL</u></b>				
<b>Proposed Design:</b>				
<b>Pathway Surface</b>				
0.35 miles of improved sidewalk	-	-	-	-
20 feet of 10' Crushed Stone Trail	LF	20	\$25.00	<u>\$500.00</u>
			Subtotal	\$500.00
<b><u>Intersections and Access Points</u></b>				
<b>Sprague Avenue</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	<u>\$1,000.00</u>
			Subtotal	\$4,000.00
<b>Maple Avenue</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	<u>\$1,000.00</u>
			Subtotal	\$4,000.00
<b>Chestnut Avenue</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	<u>\$1,000.00</u>
			Subtotal	\$4,000.00
<b>Schuyler Avenue</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	<u>\$1,000.00</u>
			Subtotal	\$4,000.00
<b>Route 11 to Market Street Bridge</b>				
Directional Signage	EA	2	\$125.00	<u>\$250.00</u>
			Subtotal	\$250.00
Grand Subtotal				\$16,750.00
Contingency				20% \$3,350.00
Engineering				<u>\$4,020.00</u>
<b>GRAND TOTAL MARKET STREET CONNECTOR TRAIL</b>				<b>\$24,120.00</b>



**Table 9-6. Cost estimates for developing the Hopkins Memorial Park Connector Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b><u>HOPKINS MEMORIAL PARK CONNECTOR TRAIL</u></b>				
<b>Proposed Design:</b>				
<b>Pathway Surface</b>				
985 feet of 10' Crushed Stone Trail through the Park	LF	985	\$25.00	\$24,625.00
725 feet of improved sidewalk along Beverly Drive and Lawrence Street	-	-	-	-
920 feet of 10' Crushed Stone Trail from Lawrence Street to Kingston Area Trail.	LF	920	\$25.00	<u>\$23,000.00</u>
			Subtotal	\$47,625.00
<b><u>Intersections and Access Points</u></b>				
<b>Beverly Drive</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$6,000.00
<b>Zerby Avenue</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$6,000.00
<b>Auxiliary Facilities</b>				
<b>Parking / Trail Heads</b>				
Trailhead Signage Kiosk -John J. Hopkins Memorial Park	EA	1	\$3,000.00	<u>\$3,000.00</u>
			Subtotal	\$3,000.00
			Grand Subtotal	\$62,625.00
			Contingency	20% \$12,525.00
			Engineering	<u>\$15,030.00</u>
<b>GRAND TOTAL HOPKINS MEMORIAL PARK CONNECTOR TRAIL</b>				<b>\$90,180.00</b>



**Table 9-7. Cost estimates for developing the Schuyler Ave Playground Connector Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b>SCHUYLER AVE PLAYGROUND CONNECTOR TRAIL</b>				
Proposed Design:				
Pathway Surface				
115 feet of 10' Wide Crushed Stone Trail.	LF	115	\$25.00	\$2,875.00
Grand Subtotal				\$2,875.00
Contingency			20%	\$575.00
Engineering				\$690.00
<b>GRAND TOTAL SCHUYLER AVE PLAYGROUND CONNECTOR TRAIL</b>				<b>\$4,140.00</b>

**Table 9-8. Cost estimates for developing the Roosevelt Park Connector Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b>ROOSEVELT PARK CONNECTOR TRAIL</b>				
Proposed Design:				
Pathway Surface				
1050 feet of improved sidewalk along Tripp Street				
550 feet of 10' Crushed Stone Trail from Tripp Street to Kingston Area Trail.	LF	115	\$25.00	\$2,875.00
			Subtotal	\$2,875.00
Auxiliary Facilities				
Parking / Trail Heads				
Trailhead Signage Kiosk -Roosevelt Park	EA	1	\$3,000.00	\$3,000.00
Balusters required to restrict access to trail	EA	2	\$200.00	\$400.00
			Subtotal	\$3,400.00
Grand Subtotal				\$6,275.00
Contingency			20%	\$1,255.00
Engineering				\$1,506.00
<b>GRAND TOTAL ROOSEVELT PARK CONNECTOR TRAIL</b>				<b>\$9,036.00</b>



**Table 9-9. Cost estimates for developing the Forty Fort Connector Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b>FORTY FORT CONNECTOR TRAIL</b>				
<b><u>Proposed Design:</u></b>				
<b>Pathway Surface</b>				
1740 feet of improved sidewalk	-	-	-	-
220 feet of 10' Crushed Stone Trail	LF	220	\$25.00	\$5,500.00
<b>Structures</b>				
At-grade rail crossing	LS	1	\$ 7,500.00	<u>\$7,500.00</u>
			Subtotal	\$13,000.00
<b><u>Intersections and Access Points</u></b>				
<b>Oak Street</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	<u>\$1,000.00</u>
			Subtotal	\$4,000.00
<b>Tripp Manor (2 crossings)</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	2	\$3,000.00	\$6,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	4	\$500.00	<u>\$2,000.00</u>
			Subtotal	\$8,000.00
<b>Murray Street</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	<u>\$1,000.00</u>
			Subtotal	\$4,000.00
Grand Subtotal				\$29,000.00
Contingency				20% \$5,800.00
Engineering				<u>\$6,960.00</u>
<b>GRAND TOTAL FORTY FORT CONNECTOR TRAIL</b>				<b>\$41,760.00</b>



**Table 9-10. Cost estimates for developing the O'Hara Park Connector Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b><u>O'HARA PARK CONNECTOR TRAIL</u></b>				
<b><u>Proposed Design:</u></b>				
<b>Pathway Surface</b>				
230 feet of 10' Wide Crushed Stone Trail.	LF	230	\$25.00	\$5,750.00
<b>Auxiliary Facilities</b>				
Balusters to restrict access to Trail from O'Hara Field.	EA	4	\$200.00	\$800.00
			Subtotal	\$6,550.00
Grand Subtotal				\$6,550.00
Contingency			20%	\$1,310.00
Engineering				\$1,572.00
<b>GRAND TOTAL O'HARA PARK CONNECTOR TRAIL</b>				<b>\$9,432.00</b>

**Table 9-11. Cost estimates for developing the Seminary Place Connector Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b><u>SEMINARY PLACE CONNECTOR TRAIL</u></b>				
<b><u>Proposed Design:</u></b>				
<b>Pathway Surface</b>				
1020 feet of sidewalk improvement	-	-	-	-
Bike Route/Share The Road Signs	EA	4	\$ 125.00	\$500.00
			Subtotal	\$500.00
<b>Structures</b>				
At-grade rail crossing	LS	1	\$ 7,500.00	\$7,500.00
			Subtotal	\$8,000.00
<b><u>Intersections and Access Points</u></b>				
<b><u>Murray Street</u></b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
			Subtotal	\$4,000.00
<b>Auxiliary Facilities</b>				
Balusters may be required at end of Seminary Place to restrict access to Kingston Area Trail.	EA	4	\$200.00	\$800.00
			Subtotal	\$800.00
Grand Subtotal				\$13,300.00
Contingency			20%	\$2,660.00
Engineering				\$3,192.00
<b>GRAND TOTAL SEMINARY PLACE CONNECTOR TRAIL</b>				<b>\$19,152.00</b>



**Table 9-12. Cost estimates for developing the Luzerne County Park Connector Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b><u>LUZERNE COUNTY PARK CONNECTOR TRAIL</u></b>				
<b><u>Proposed Design:</u></b>				
<b>Pathway Surface</b>				
820 feet of improved sidewalk	-	-	-	-
4480 feet of 10' Crushed Stone Trail	LF	820	\$25.00	\$20,500.00
<b>Structures</b>				
Abrahams Creek Bridge sidewalk widening	LS	1	\$10,000.00	\$10,000.00
			Subtotal	\$30,500.00
<b><u>Intersections and Access Points</u></b>				
<b>Murray Street</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	2	\$3,000.00	\$6,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	4	\$500.00	\$2,000.00
			Subtotal	\$8,000.00
<b>Wyoming Avenue (Route 11)</b>				
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	4	\$500.00	\$2,000.00
			Subtotal	\$2,000.00
<b><u>Auxiliary Facilities</u></b>				
Balusters at Dennison Street	EA	4	\$200.00	\$800.00
			Subtotal	\$2,800.00
Grand Subtotal				\$43,300.00
Contingency				20% \$8,660.00
Engineering				\$10,392.00
<b>GRAND TOTAL LUZERNE COUNTY PARK CONNECTOR TRAIL</b>				<b>\$62,352.00</b>



**Table 9-13. Cost estimates for developing the West Side Vo-Tech Connector Trail.**

<u>Trail/Section/Improvements</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<b><u>WEST SIDE VO-TECH CONNECTOR TRAIL</u></b>				
<b><u>Proposed Design:</u></b>				
<b>Pathway Surface (10' Wide Sidewalk)</b>				
560 feet of improvements to existing sidewalks	LF	560	\$100.00	\$56,000.00
1443 feet of newly constructed sidewalk	LF	1443	\$64.00	<u>\$92,352.00</u>
			Subtotal	\$148,352.00
<b>Structures</b>				
Widening of Evans Street under Route 309 underpass.	SY	300	\$100.00	\$30,000.00
Embankment Grading	LS	1	\$5,000.00	<u>\$5,000.00</u>
			Subtotal	\$35,000.00
<b><u>Intersections and Access Points</u></b>				
<b>Valleyview Drive</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$6,000.00
<b>Cooper Street</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$6,000.00
<b>Shopping Plaza Driveways</b>				
Thermoplastic Crosswalk, 2 "Crossing Ahead" Signs	EA	1	\$3,000.00	\$3,000.00
Trail Signage Each Approach-Street Name, STOP, Dismount Before Crossing	LS	2	\$500.00	\$1,000.00
Pedestrian Lighting recommended	EA	1	\$2,000.00	<u>\$2,000.00</u>
			Subtotal	\$6,000.00
<b><u>Auxiliary Facilities</u></b>				
Pedestrian Lighting recommended	EA	1	\$2,000.00	\$2,000.00
Parking / Trail Heads				
Trailhead Signage Kiosk -Vo-Tech School	EA	1	\$3,000.00	<u>\$3,000.00</u>
			Subtotal	\$3,000.00
Grand Subtotal				\$204,352.00
Contingency				20% \$40,870.40
Engineering				<u>\$49,044.48</u>
<b>GRAND TOTAL LUZERNE COUNTY PARK CONNECTOR TRAIL</b>				<b>\$294,266.88</b>



### 9.3 Phased implementation plan

Based upon existing trail connections, land acquisition feasibility, and construction costs, implementation of the Kingston Area Trail Master Plan is recommended as follows:

#### **PHASE I: Back Mountain Trail Extension**

This proposed trail will connect the existing Back Mountain Trail to the Luzerne County Levee Trail System at the Kingston Recreation Center. Providing the linkage of these two trail systems is a valuable project on its own. The majority of the route is proposed along an abandoned railroad grade which is currently owned by the Luzerne County Redevelopment Authority, a willing partner in this project. Although minor crossings of three residential properties and three commercial will need to be negotiated, it appears that the preferred route for this trail is very feasible. The proposed trail connection to the West Side Area Vo-Tech will also provide students with a safe route to school.

#### **PHASE II: Kingston Area Trail**

The Kingston Area Trail is the “spine” of the proposed trail system and will be the most beneficial to the local community. Much of this trail will be a “rail with trail” configuration along a rail line owned by the Luzerne County Redevelopment Authority. Passing through the middle the community, this trail will provide easy access to many of the local parks and ball fields. While the Kingston Area Trail is being constructed, it is recommended that the associated connector trails also be installed. In this way, the trail will provide the maximum benefit for the surrounding communities.

Depending upon the status of the proposed extension of the Susquehanna Warrior Trail and the availability of funding, the proposed bridge over the Toby Creek flume may be installed at a later date.

#### **PHASE III: Larksville Connector Trail**

Although the Larksville Connector Trail will provide area residents with a valuable connection to the regional trail system, this trail is dependent upon many outside factors. Agreements will be needed with multiple property owners to allow the trail to cross private property. In addition, this trail is also dependent upon the completion of the northern section of the Susquehanna Warrior Trail to provide connection to the rest of the trail system.

#### **PHASE IV: Backroad Bike Route**

Once the Larksville Connector Trail is completed, this bike route will provide a northern connection to the proposed trail system and the West Side Trail. It will also complete a regional “loop” that will allow users to ride the entire system without having to double back. However, additional engineering studies will be required to assure that this existing road system is adequate for recommendation as a local bike route.



### 9.4 Trail Management, Staffing and Maintenance Budgeting

This report discusses trails with significantly varied lengths and construction types. Due to this variation, trail management, staffing and maintenance costs are difficult to estimate. Documentation published in 2005 by the Northeast Regional Office of the Rails To Trails Conservancy (RTC) documentation suggest that there are two general answers to why this is: 1. Costs to maintain individual trails may be contained within a larger budget for a park and recreation department; or, 2. Maintenance work is done by dedicated volunteer groups on an “as-needed” basis and minimal records are maintained.

RTC’s 2005 documentation is based upon a survey of 100 rail trails and provides a snapshot of where trail managers are focusing their maintenance resources. The detailed maintenance budgets provided indicate that the average annual maintenance costs, excluding resurfacing, range from \$6,559 per mile to \$9,172 per mile for government run trails. Our 2010 estimate, which includes a contingency for inflation and also includes management and staffing, is just over \$8,150 per mile.

Maintenance costs vary depending upon the age of the trail, the type of trail constructed (crushed stone, asphalt, concrete), the number and types of structures (drainage facilities, bridges, fences, trail amenities) and the level and type of use of the trail. Maintenance of recently constructed trails or trails with minimal use may be limited to annual mowing, trimming and vegetation control with minimal costs for maintenance of the physical improvements. Conversely, older trails will require investments of a magnitude similar to their initial construction to provide the needed level of maintenance.

Table 9-11 is an annual budget for a “generic trail” with an assumed length of ten miles, two trail heads (at either end) with parking for ten passenger automobiles, 9 road crossings and trail amenities (picnic table, trash can, bike rack) at 1 mile intervals. No major structures (bridges, tunnels, or underpasses) are included. Routine annual maintenance is anticipated for landscaping and facilities and structures. For the purposes of this report, the trail is assumed to be at an age where resurfacing is required and is undertaken incrementally over a three year period.

**Table 9-14. Sample budget for staffing and maintenance**

<u>Maintenance Activity</u>	<u>FREQUENCY</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
<b>TRAIL SURFACE</b>					
<b>10' Wide Asphalt Trail</b>					
1½" Overlay	Annual For 3 Years	SY	17,600	\$10.00	\$176,000.00
Crosswalk Maintenance (3/year)	Annual	EA	3	\$3,000.00	\$9,000.00
				Subtotal	\$185,000.00
<b>10' Wide Crushed Stone Trail</b>					
Resurface	Annual For 3 Years	SY	17,600	\$7.50	\$132,000.00
Crosswalk Maintenance (3/year)	Annual	EA	3	\$3,000.00	\$9,000.00
Re-Grading	Annual	EA	2	\$2,000.00	\$4,000.00
Pothole repair and other patches	Annual or As Required	LS	1	\$1,500.00	\$1,500.00
				Subtotal	\$146,500.00



**LANDSCAPING**

Keep trail-side land clear of trash and debris	Annual	LS	1	\$2,500.00	\$2,500.00
General maintenance of 10 car trailhead (litter clean-up, etc.)	Annual	LS	2	\$1,500.00	\$3,000.00
Mowing	Annual	LS	1	\$10,000.00	\$10,000.00
Leaf removal (If Required)	Annual	HRS	40	\$40.00	\$1,600.00
Tree pruning	Annual	HRS	40	\$40.00	\$1,600.00
Tree removal	Annual	LS	1	\$3,000.00	\$3,000.00
Invasive species removal	Annual	MI	10	\$100.00	\$1,000.00
Application of herbicides or pesticides	Annual	MI	10	\$150.00	\$1,500.00
Clearing of drainage channels and culverts	Annual or As Required	MI	10	\$105.00	<u>\$1,050.00</u>
				Subtotal	\$25,250.00

**FACILITIES & STRUCTURES**

Empty trash cans at trailheads and along trail	Annual	MI	10	\$200.00	\$2,000.00
Maintenance of informational kiosks (repairs, etc.)	Annual or As Required	EA	2	\$250.00	\$500.00
Maintenance of picnic tables, benches, etc.	Annual or As Required	LS	1	\$100.00	\$100.00
Repair/maintenance of signs	Annual or As Required	MI	203	\$10.00	\$2,030.00
Maintenance of lighting	Annual	EA	2	\$250.00	\$500.00
Maintenance of gates, bollards and fencing	Annual or As Required	MI	10	\$287.00	\$2,870.00
General bridge maintenance (minor deck/railing repair)	Annual	LS	1	\$1,500.00	\$1,500.00
Railroad at-grade crossing maintenance (inspection, signage, drainage)	Annual	LS	1	\$500.00	<u>\$500.00</u>
				Subtotal	\$10,000.00

<b>Total Estimated Annual Costs with Asphalt Trail</b>	<b>\$220,250.00</b>
Contingency 10%	\$22,025.00
Management / Staffing	<u>\$24,227.50</u>
<b>Total</b>	<b>\$266,502.50</b>

<b>Total Estimated Annual Costs with Crushed Stone Trail</b>	<b>\$181,750.00</b>
Contingency 10%	\$18,175.00
Management/Staffing	<u>\$19,992.50</u>
<b>Total</b>	<b>\$219,917.50</b>



## 9.5 Potential sources for capital and operating revenues

Historically, there has been trail acquisition/design/development funding opportunities available at the federal, state and local levels. Reductions in federal, state and local revenues have resulted in similar reductions in trail funding opportunities. All publically available funding sources have become very competitive. The greatest chance for success in securing public finds for trail projects will require applicants to identify, establish and build strategic public and private partnerships. These can be partnerships between federal, state and local governmental agencies, eligible non-profit trail groups, businesses and individuals from the private sector. Successful applicants will need to identify and begin building the partnerships as early in the funding process.

Following is a summary of potential sources of public funding opportunities.

### **Federal Programs**

Safe, Accountable, Efficient Transportation Equity Act— a Legacy for Users (SAFETEA-LU) **This program, currently awaiting reauthorization by the federal government, is the former** primary source of federal funding for trails and greenways. The Safe, Accountable, Efficient Transportation Equity Act— a Legacy for Users (SAFETEA-LU) is currently up for reauthorization under the Active Community Transpiration Act.

The Active Community Transportation Act (“ACT Act”) of 2010, a marker bill to be incorporated into the federal transportation reauthorization when passed by Congress, will provide communities with concentrated investments to complete walking and bicycling networks to shift short driving trips to active transportation. By providing communities with the resources needed to build safe and connected non-motorized routes between the places where people live, work, learn, play and shop, the bill will provide cost-effective transportation choices for millions of Americans.

### **Community Development Block Grant Program**

The U.S. Department of Housing and Urban Development (HUD) offers financial grants to communities for neighborhood revitalization, economic development, and improvements to community facilities and services, especially in low and moderate-income areas. Several communities have used HUD funds to develop greenways, including the Boulding Branch Greenway in High Point, North Carolina. Grants from this program range from \$50,000 to \$200,000 and are either made to municipalities or non-profits. There is no formal application process.

### **Land and Water Conservation Fund (LWCF) Grants**

This federal funding source was established in 1965 to provide park and recreation opportunities to residents throughout the United States. Money for the fund comes from the sale or lease of nonrenewable resources, primarily federal offshore oil and gas leases and surplus federal land sales. LWCF funds are used by federal agencies to acquire additions to National Parks, Forests, and Wildlife Refuges. In the past, Congress has also appropriated LWCF monies for so-called "state-side" projects. These "state-side" LWCF grants can be used by communities to acquire and build a variety of park and recreation facilities, including trails and greenways. These funds are distributed by the National Park Service to the Pennsylvania Department of Conservation and



Natural Resources. They require a 50 percent match from the local project sponsor. In PA contact DCNR, Recreation and Conservation, 717-783-2659.

### **Rivers, Trails, and Conservation Assistance Program**

The National Parks service operates this program aimed at conserving land and water resources for communities. Eligible projects include conservation plans for protecting these resources, trail development, and greenway development.

### **State Programs**

#### **DCNR C2P2 Community Recreation and Conservation**

**Description:** Community Recreation and Conservation grants are awarded to municipalities and authorized nonprofit organizations for recreation, park and conservation projects. These include the rehabilitation and new development of parks and recreation facilities (development projects); acquisition of land for active or passive park and conservation purposes (acquisition projects); and planning for feasibility studies, trails studies, conservation plans, site development planning, and comprehensive recreation, greenway and open space planning. Most projects require a 50% match except for some technical assistance grants and development projects eligible as small community projects whose total project cost is \$60,000 or less. The small community development projects provide a municipal applicant with a population of 5,000 or less with an alternate method of funding with a focus on playground rehabilitation to meet current safety and accessibility standards.

This Grant Program is administered by the Bureau of Recreation and Conservation and is funded by Keystone Recreational Trails Land & Water Conservation Fund Growing Greener 1. Eligible applicants include county or municipal governments, higher educational and other educational Institutions and IRS 501(c)3 and/or PA Bureau of Charitable Organizations non-profits.

### **Other Programs**

#### **National Trails Fund**

Created in 1998, American Hiking Society's National Trails Fund is the only privately supported national grants program providing funding to grassroots organizations working toward establishing, protecting and maintaining foot trails in America. National Trails Fund grants help give local organizations the resources they need to secure access, volunteers, tools, and materials to protect America's cherished hiking trails.

American Hiking Society's National Trails Fund is the only privately funded, national grants program dedicated solely to building and protecting hiking trails. Now in its eighth year, the fund has awarded nearly \$487,000 to 157 grassroots organizations all over the nation working to establish, protect and maintain foot trails in America. Awards range from \$500 to \$5,000 per project.

Eligible projects include those that have hikers as the primary constituency, secure trail lands, create visible and substantial access, improved hiker safety, avoidance of environmental damage, promote constituency building around specific trail projects and volunteer recruitment and support.



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## **APPENDIX A: MEETING MINUTES**







## **GREATER KINGSTON TRAIL/GREENWAY FEASIBILITY/MASTER PLAN**

**Public Meeting  
May 19, 2008  
6:30 pm  
Luzerne County Annex**

### **Meeting Minutes**

#### **Meeting Attendees:**

Julie McMonagle	Pennsylvania Environmental Council
Janet Sweeney	Pennsylvania Environmental Council
George White	Rettew
James Caldwell	Rettew
Brent L. Birth	Rettew
Andy Gegaris	Luzerne County
Brian L. Grove	Senator Baker
Karen Szwast	West Side Trail
Michele Schasberger	Wyoming Valley Wellness Trails Partnership
Judy Rimple	ASTA
Michael Thomas	PA House NE Delegation
Rory Sweeney	Times Leader

Julie McMonagle, Vice President, Pennsylvania Environmental Council (PEC) NE Region Office gave a brief overview of the agenda and the project background. According to Julie, there is a lot of trail work occurring in the county and this project will connect the existing trails on the west side of the Susquehanna River. She also explained that PEC recently put out a Request for Proposals for the City of Wilkes-Barre Trail/Greenway Master Plan. This project will connect the D&L National Heritage Corridor, key destinations in the City of Wilkes-Barre and other regional trails to recreation facilities along the east side of the Susquehanna River.

According to Julie, the time frame for this project is approximately twelve (12) months. She also stated that the study area encompasses the following municipalities: Courtdale, Edwardsville, Forty Fort, Kingston, Larksville, Luzerne, Pringle and Swoyersville Boroughs.

Michelle Schasberger added that according to a study by the Delaware Valley Regional Planning Commission, utilitarian bike trips average 60%. This means that these trips are not just recreational trips, but trips made as a means of transportation for work, shopping and other reasons.

Julie went on to explain that PEC received funding from the Pennsylvania Department of Conservation and Natural Resources, Luzerne County Office of Community Development and the Sordoni Foundation in order to conduct this project. She stated that project will follow the standard (DCNR) public participation process. According to Julie, PEC will conduct the public participation process aspect of this project which includes municipal surveys, general public questionnaires, and key person interviews. Julie added that we will try to meet with the individual municipalities in order to get their input. Julie also stated that PEC retained Rettew to prepare the site analysis, inventory and map of area amenities, develop proposed trail routes and develop trail construction and management cost estimates. Karen Szwast suggested that the best way to meet with the municipalities was to get on their respective Working Session agendas. She also added that, when at these meetings, make a request that one or two people from the municipality join the steering committee for the project.



Julie then explained that the long term maintenance and management is very important to the success of the project. She added that we probably do not want to create another organization to do the long term maintenance and management but rather would like to use existing organizations or trail groups.

Julie also informed the meeting attendees that PEC applied to DCNR for another trail/greenway feasibility/master plan project for a study area that will encompass Dallas, Jackson, Kingston, Lake, Lehman, Plymouth Townships and Dallas and Harvey's Lake Boroughs in Luzerne County. According to Julie, the proposed trail/greenway will examine potential connections to key destinations including but not limited to the Back Mountain Trail, Susquehanna Warrior Trail, Frances Slocum State Park, the Back Mountain Recreation Park, Jackson Township Park, Moon Lake Park and adjoining Lackawanna Forestry Tract and recently acquired Theta Lands along Harvey's Creek, and area state game and forest lands. Julie then turned the meeting over to Jim Caldwell of Rettew.

Jim introduced the Rettew team to the meeting attendees, including himself, George White, Senior Environmental Scientist and Brent Birth, PLS Surveying Services. Jim explained that they all will be the primary contacts at Rettew for this project. Jim then explained that Rettew will be following the basic outline for services as represented in the RFP. Rettew will collect background data, create mapping, identify linkages and potential corridors within the study area, utilize the survey data as collected by PEC, identify ownership of parcels, conduct a physical assessment of the study area to delineate what is out there and how it will impact the trail, develop the preferred alignment (with input from the steering committee, surveys, municipalities, etc), determine the cost estimates for construction and develop a maintenance and management plan.

George White then presented the mapping completed so far and explained that the maps are works in progress and not final by any means. George explained that the GIS database, to date, includes the Luzerne County parcel data, 2005 aerial photos and USGS maps. He informed the meeting attendees that Rettew is going to push the technology with this project by bringing a "stand alone" GIS to the meetings. This GIS is very interactive which George then demonstrated the capabilities of the GIS to the meeting attendees.

The floor was then opened up for questions and comments.

Judy Rimple stated that it is very important to establish the key destinations and identify where people want to go (i.e. Baskin Robbins). She added that there is a lot of water stuff in the study area including the levees and those areas should definitely be looked at for this project. She also added that we should keep the local elected officials informed about the project.

Michelle Schasberger stated that we should try to identify existing ROWs that are established community trails/paths as possible feeders to the trail. She added that there are places/paths that may be in danger of being lost and these sites/paths, once identified, should be given consideration. Judy agreed and added that we will need to prioritize what is necessary to acquire now before we may lose it.

Michelle then stated that from her perspective the following three items should be given consideration: community paths (especially those in danger of being lost); key connector parcels; and existing trail heads (what are the issues we have at existing access points). She also asked that 3<sup>rd</sup> Avenue be looked at for at least a pedestrian crossing because it is a very dangerous intersection.

The entire group agreed that there needs to be some sort of overall umbrella coordinating entity.

Julie then stated that based on the input from this meeting PEC's next steps will be to set up the following meetings:

- Local municipalities to explain the project and solicit for steering committee members;
- Allen Bellas from the Luzerne County Redevelopment Authority because the Authority is a major owner of rail corridors within the study area;



- Jim Brozena Luzerne County Flood Protection Authority to discuss potential connections to the levee trails; and
- Joe Gibbons Luzerne County Engineers Office to also discuss the levee trails.

Julie then stated that key destinations and linkages will be the next iteration of maps for the next steering committee meeting. The meeting attendees recommended that PEC send a blanket e-mail to the steering committee requesting key destinations within the study area.

Julie informed the committee that the next meeting date would be set for early July.

There being no other comments or discussion the meeting adjourned at 8:00 pm.







## **GREATER KINGSTON TRAIL/GREENWAY FEASIBILITY/MASTER PLAN**

**Public Meeting  
October 7, 2008  
6:30 pm  
Hoyt Library**

### **Meeting Minutes**

#### **Meeting Attendees:**

Julie McMonagle	Pennsylvania Environmental Council
Janet Sweeney	Pennsylvania Environmental Council
Joe Chacke	Forty Fort Borough
Bob Skulsky	Susquehanna Greenways/D&L NHC
Andy Gegaris	Luzerne County
Michele Schasberger	Wyoming Valley Wellness Trails Partnership
Karen Szwast	West Side Trail Commission
George White	Rettew

Julie McMonagle, Vice President, Pennsylvania Environmental Council (PEC) NE Region Office explained the background of the project. According to Julie, there is a lot of trail work occurring in the county and it is the intent of this project to connect the existing trails on the west side of the Susquehanna River. She emphasized the importance of the future management and maintenance of the trail. Julie explained that the long term maintenance and management is very important to the success of the project. She added that we probably do not want to create another organization to do the long term maintenance and management but rather would like to use existing organizations or trail groups. According to Julie there are funding opportunities for acquisition, design and construction of the trail, however, once the trail is built the management and maintenance will have to come from other sources.

Julie then introduced George White from Rettew, the consultant working on the project for a project update. George reiterated that this is a living document and will be updated and changed accordingly as we progress through the planning process. George stated that Rettew is still in the process of collecting and preparing the GIS data, photos, etc. for the master plan.

George informed the committee that we(Rettew and PEC staff) met with Allen Bellas, Redevelopment Authority of Luzerne County/Luzerne County National Recreation Trail earlier in the day to discuss their holdings within the study area. According to George, the meeting went well and Allen is supportive of our efforts. Mr. Bellas also informed us of a rail right of way that we previously did not have in the GIS database. This right of way is in Kingston borough and runs from the northern boundary of Kingston borough where it crosses the Crossvalley Expressway to the Kingston Community Park, however there is a break in the ROW just below Rutter Avenue. The Redevelopment Authority also owns a track in Edwardsville, this option would involve crossing Toby Creek. There used to be a railroad bridge but unfortunately that is now gone.

George then presented the committee with the following items to discuss and think about:  
Wyoming Valley West School District some of the schools are planned for closing, however, State Street school is safe.

According to George, in order to tie into the Susquehanna Warrior Trail we need to get around Lech (he has encroached on about 3/10 of a mile of the trail). Potential options are to go over Carey Avenue, down the sidewalk on Main Street, or through the Heavy Media property at the lower edge of their property; or perhaps through Larksville, but this option presents a very steep grade. Much discussion ensued regarding this issue and it was decided to continue to think about options and discuss it again at the next meeting.

Kingston – a road was identified that seems to have very little traffic and was just paved, we need to find out who owns it and are there any plans for it. It could be a flood basin right of way, and we should contact Jim Brozena to verify that.

Forty Fort Borough would like to see the trail go through the borough along the rail corridor. According to Joe Chake it is an area of concern due to garbage and overgrown foliage.

We need to add the Dallas Area Municipal Authority to the mailing list as there is potential DAMA right of way that could work for the trail.

Vaughn Street may be a possibility especially since it is a lightly traveled road.

Joe also informed the committee that there are many key destinations in Forty Fort Borough including the Little League Fields, Holy Name Field, Forty Fort Park, Dana Street Elementary School, the Meeting House, the Cemetery, and the Dennison House on Dennison Street. The cemetery also provides a connection to the levee trail, but we would need to talk with Dick Hughes, solicitor for the Cemetery Association. There is also an alley that traverses the borough that would provide a connection from the park and school to the other end of the borough near the Dunkin Donuts. From there we would like to see a connection to the West Side Trail with the Svetland House as a key destination.

Rettew will continue to collect background data, create mapping, identify linkages and potential corridors within the study area, utilize the survey data as collected by PEC, identify ownership of parcels, conduct a physical assessment of the study area to delineate what is out there and how it will impact the trail, develop the preferred alignment (with input from the steering committee, surveys, municipalities, etc), determine the cost estimates for construction and develop a maintenance and management plan.

George needs to label the names of the parks.

Julie informed the committee that the next meeting date would be set for November, 2008.

There being no other comments or discussion the meeting adjourned at 8:00 pm.



## **GREATER KINGSTON TRAIL/GREENWAY FEASIBILITY/MASTER PLAN**

**Public Meeting  
November 19, 2008  
6:00 pm  
Hoyt Library**

### **Meeting Minutes**

#### **Meeting Attendees:**

Janet Sweeney	Pennsylvania Environmental Council
Michele Schasberger	Wyoming Valley Wellness Trails Partnership
George White	Rettew

George began the meeting with a focus on potential connections with the Back Mountain Trail through Luzerne Borough. One issue in this area is crossing the off-ramp of the Crossvalley Expressway/Rt. 309 in the Borough.

Once the trail approaches Rutter Avenue there is a problem area behind an accountant's office. At this area there are right of way (ROW) issues. According to George, the Redevelopment Authority of Luzerne County (LCRA) right of way in Kingston Borough runs from the northern boundary of Kingston Borough where it crosses the Crossvalley Expressway/Rt. 309 to the Kingston Community Park, however there is a break in the ROW just below Rutter Avenue.

Michelle stated that Kingston Borough may not be interested if there are perceived negative impacts to their residents.

George stated that Option 1A designates the spine of trail as the main grade of the LCRA. The original idea was the abandoned rail grade to the north because it is mostly privately owned. However, Allen Bellas is amenable to letting us designate the active line currently owned by Luzerne County Redevelopment Authority. The positive aspect to this option is that it is ready to go and was just put it into the design phase. The parks that we were hoping to connect to can be serviced just as well from this option, as from the original option.

The focus of the discussion went back to Luzerne Borough and the issue of going around the flood basin located there. The last time we met, George had been to the site and informed the committee that there was a walkable area along the side of the flood basin with trees and grass. It also seemed as if people were using this as a walking trail. However, since then, George revisited the site and found that the trees were cut down and the grass was gone. Due to this activity, George felt that we should contact Jim Brozena to ask him about this area and find out what the future plans are there.

However, a benefit to using this area for the trail is that we could provide a connector to the West Side Career and Technology Center on Courtright Street to the flood basin, thereby, providing the school access to the flood basin which could perhaps provide some educational opportunities for the students.

George then directed the committee to look at the east side of the study area. He stated that with Option 1A, there was a potential to tie into the Frank Slapar Park in West Wyoming Borough with a spur. He added that there are wetlands on the property perhaps providing the potential for a nice small nature trail.

According to George, as the trail continues west we could run from the rail grade down Dennison Street (the sidewalks are in poor condition but at the very least there is a sidewalk) to provide a connection to the Luzerne County Sports Complex in Fort Borough.

Michelle asked that Rettew assign a different color to the trail options that we feel are a priority at this time so they stand out. She added that we should not get rid of the other options, but just highlight the preferred ones at this time.

As we continue west through the study area, George indicated that in Edwardsville Borough there are some right of way issues at the west end of the rail spine.

George then stated that as we continue through Edwardsville Borough we could provide a connection to the John J. Hopkins Memorial Park located between High Street and Lawrence Street. We could provide this connection to the park with either a trail over an underground stream or along our rail spine (realizing rail right of way issues).

According to George, there is a quad trail up through mine lands, from the back of a parking lot all the way down to Church Street in Larksville Borough that is under one owner. He added that we also need to contact Allen Bellas regarding what the WVW School Board is planning for their property in Larksville Borough which is in the vicinity of the mine lands.

There being no other discussion the meeting adjourned at 7:30 pm



# **GREATER KINGSTON TRAIL/GREENWAY FEASIBILITY/MASTER PLAN**

## **Steering Committee Meeting**

**May 20, 2009**

**6:30 pm**

**The Luzerne County Annex**

## **Meeting Minutes**

### **Meeting Attendees:**

Janet Sweeney	Pennsylvania Environmental Council
Julie McMonagle	Pennsylvania Environmental Council
Michele Schasberger	Wyoming Valley Wellness Trails Partnership
Bob Skulsky	D&L/SGP
Jim Caldwell	Rettew
George White	Rettew

Jim Caldwell gave a brief update of the project status since our last meeting which was held on November 19, 2009. Based on the feedback received from the steering committee, Rettew has revised the options/alignments since that last meeting.

According to Rettew, since the last meeting the “Back Road Bike Route” has been added in order to make a connection throughout the entire study area. However there is not one consistent name for the “Back Road”. It was suggested that we look in the West Side Trail Plan for a name.

Rettew suggested that, along Welles Street and Slocum Avenue, we would only have to provide signage for the trail, making this an easy implementation option.

According to Rettew, alternative alignments are identified on the map by dashed lines. The main spines are identified as the Kingston Area Trail and the Back Mountain Trail Extension both providing connections to parks and schools. The third trail alignment option is the Larksville Trail which ties into the “Back Road Bike Route” at Romanesky Park in Larksville with a potential connection to the Susquehanna Warrior Trail.

The extension of the Back Mountain Trail is shown as a dashed line along Rutter Avenue and it eventually connects to the Levee Trail. All that would be necessary is to provide signage along this route to direct people either north or south. Church Street could be a potential trail head.

The Back Mountain Trail Extension as identified as an option on the draft map, traverses private property Right of Way, however the right of way has not yet been encroached upon. So this is something to think about and decide how to approach it if we decide to pursue this as a potential alignment.

The questions was raised regarding what types of trailheads would be appropriate. The type of trail heads will be handled in the final design phase and can be determine then.

PEC will meet with the various municipalities to present the trail maps and try to get “buy in” from the municipalities. The master plan will not be finalized until these municipal meetings have been conducted.

It was recommended that we look into the Rail to Trails Conservancy as they have information regarding the benefits of trails, but local testimonials would be very beneficial to have when meeting with the municipalities.

We should stress that this will be creating an amenity for the people along the trail, not really bringing people into the area, but providing an amenity.

The question was raised as whether or not we are going to recommend phases, first the main route and then the connectors? Yes, we are going to recommend phases. Let’s get what can be done quickly “low hanging fruit.” We also need to put this question to the municipalities, ask them what their priorities are and what would they support?

The question was raised that if the municipalities choose to become part of existing trail organizations how would these existing organizations prioritize trail sections? Would their trail sections take priority over the alignments that will come out of the Kingston feasibility/master plan?

PEC will also shop this around to bicycling shops. Sicklers, Main Bike World, Around Town Bikes.

Rough draft of the report is done and has been submitted to PEC.



## **APPENDIX B: KEY PERSON INTERVIEWS**





**Trail/Greenway  
Feasibility/Master Plan  
Key Person Interview Questions**

**NAME:**

**TITLE**

**ORGANIZATION**

1. What does your organization/business do (mission of the organization)?

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2. Do you think a trail/greenway will benefit your organization/business? How or Why?

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3. Do you regularly use or promote the use of bicycle and pedestrian facilities?

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4. What is your opinion on the current state of bicycle and pedestrian mobility in the region?

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5. Do you think the area is in need of a trail/greenway? Why or Why not?

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6. What facilities/amenities or linkages should be included for a trail/greenway?

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7. What concerns do you have about a trail/greenway?

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8. Would you or your organization/business be interested in participating in the long-term management and maintenance of the trail (either through volunteering your time or cash/materials donations)?

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9. Any other comments or concerns?

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Thank you for taking the time to assist the Pennsylvania Environmental Council on this  
Trail/Greenway Master Plan Project



**Trail/Greenway  
Feasibility/Master Plan  
Key Person Interview Questions**

**NAME:** Mike Dziak  
**TITLE** President/CEO  
**ORGANIZATION** Earth Conservancy

1. **What does your organization/business do (mission of the organization)?**  
*EC will lead our communities in the reclamation of mine-scarred lands and streams, returning strong economic, environmental and social value by creating a well-planned vibrant valley, protected by green ridge tops.*
2. **Do you think a trail/greenway will benefit your organization/business? How or Why?**  
*It is part of our mission to preserve 10,000 acres of EC's lands as green/recreational space. We believe preserving the pristine lands in the Wyoming Valley enhances the beauty of the area and improves quality of life by offering outdoor area for passive recreational uses. When we see use of the recreational spaces we have created, we consider that an asset to our business of reclaiming and reutilizing mine scarred lands.*
3. **Do you regularly use or promote the use of bicycle and pedestrian facilities?**  
*Yes, via our website and through promotional opportunities that periodically come about.*
4. **What is your opinion on the current state of bicycle and pedestrian mobility in the region?**  
*We find bicycle mobility to be lacking in the Wyoming Valley. There are few trails or paths along roadways that would be easy to cycle to work or use for recreational purposes. Pedestrians only have appropriate accessibility in more urban setting where sidewalks exist. In the more suburban or rural areas, the lack of sidewalks or connection of trail systems makes it difficult for hikers/runners to safely move about.*
5. **Do you think the area is in need of a trail/greenway? Why or Why not?**  
*As it is part of our mission to dedicate 10,000 acres of green space, yes, we do believe greenways are important. In our work with EPA and its consultants, it was shown that having alternative routes (trails, greenways, etc.) to work or play provides people with opportunities to get outside more often so promotes a healthier lifestyle.*
6. **What facilities/amenities or linkages should be included for a trail/greenway?**  
*Linking all existing trails would be ideal, understanding that this process would take significant planning, time and dollars to implement. Short of that, having easy access to existing trails, i.e. parking, signage would be beneficial to users.*
7. **What concerns do you have about a trail/greenway?**  
*Safety of trail/greenway user is a primary concern. Also, we consider use of the trail systems by ATVs to be a serious problem, which is not easily addressed.*
8. **Would you or your organization/business be interested in participating in the long-term management and maintenance of the trail (either through volunteering your time or cash/materials donations)?**

*Yes. We also maintain the trails/recreational spaces we currently own.*

**9. Any other comments or concerns**

*No*

**Thank you for taking the time to assist the Pennsylvania Environmental Council on this  
Trail/Greenway Master Plan Project**



**Trail/Greenway  
Feasibility/Master Plan  
Key Person Interview Questions**

**NAME:** Carol Husa  
**TITLE** Program Manager  
**ORGANIZATION** Steps to a HealthierPA Luzerne County

- 1. What does your organization/business do (mission of the organization)?**  
*Steps was the first federal program (CDC) to fund an integrated approach to evidence-based chronic disease prevention and health promotion at a community level focused on bringing together all different sectors of the community; schools, workplaces, recreation, health care/insurance, local government, etc. to implement sustainable program and policy change in order to improve health.*
- 2. Do you think a trail/greenway will benefit your organization/business? How or Why?**  
*The development and maintenance of an interconnected trail/greenway system will improve overall community health, broaden our local transportation options, improve use of outdoor spaces that are connected thru system and benefit our region economically.*
- 3. Do you regularly use or promote the use of bicycle and pedestrian facilities?**  
*Steps advocates for complete street design, safe routes to schools, traffic calming, road diets, etc.*
- 4. What is your opinion on the current state of bicycle and pedestrian mobility in the region?**  
*I think people are really supportive of this and local and state survey data supports this. We need the LCTA busses to put bike racks on their busses, improve auto driver education on bike and pedestrian safety, and encourage schools to let kids walk and bike to school. Safety needs to be improved.*
- 5. Do you think the area is in need of a trail/greenway? Why or Why not?**  
*Yes, we already have great parks and trails – they need to be connected, promoted and programmed for.*
- 6. What facilities/amenities or linkages should be included for a trail/greenway?**  
*Good signage, improved safety, promotion, benches, lighting, barrier-free for “differently-abled” people to use. Connect trails and greenways to schools, existing parks, shopping centers and places where lots of people work (so they can use trails/greenways for transportation and physical activity). More kids/people could walk/bike to school or on errands and workplaces could incorporate their use into employee wellness programs.*
- 7. What concerns do you have about a trail/greenway?**  
*Maintaining them and programming/promotion so people know to use. Safety always.*

- 8. Would you or your organization/business be interested in participating in the long-term management and maintenance of the trail (either through volunteering your time or cash/materials donations)?**

*My church annually does a clean-up day on the Back Mountain Trail. This could be something that other churches, Scouts and service learning for area students.*

- 9. Any other comments or concerns?**

**Thank you for taking the time to assist the Pennsylvania Environmental Council on this  
Trail/Greenway Master Plan Project**



**Trail/Greenway  
Feasibility/Master Plan  
Key Person Interview Questions**

**NAME:** Lance Kittelson  
**TITLE** Vice - President  
**ORGANIZATION** Susquehanna Warrior Trail

1. **What does your organization/business do (mission of the organization)?**  
*Build, and maintain an 18 ½ mile hiking and biking trail in Luzerne and Salem counties for the benefit of the public.*
2. **Do you think a trail/greenway will benefit your organization/business? How or Why?**  
*Assuming a trail/greenway is a designated improved/unimproved path for non motorized travel, this is of course what the Susquehanna Warrior Trail Council is all about. Yes a trail/greenway will benefit our efforts. A coordinated effort (Master Plan) toward a defined goal is always a better path toward success. Linking trails together greatly magnifies the benefit of the individual trail. Another major need is shared trail maintenance resources.*
3. **Do you regularly use or promote the use of bicycle and pedestrian facilities?**  
*We, the Susquehanna Warrior Trail Council actively promote our trail by organizing events and reaching out to scouting groups to provide them with project opportunities. Each event and contribution is publicized via local newspapers.*
4. **What is your opinion on the current state of bicycle and pedestrian mobility in the region?**  
*Improving, but as stated earlier a master plan and a coordinated effort is the best and easiest path (pun intended) to success.*
5. **Do you think the area is in need of a trail/greenway? Why or Why not?**  
*This is a redundant question. Yes.*
6. **What facilities/amenities or linkages should be included for a trail/greenway?**  
*Safe, clearly marked connections from one trail to the next.*
7. **What concerns do you have about a trail/greenway?**  
*None*
8. **Would you or your organization/business be interested in participating in the long-term management and maintenance of the trail (either through volunteering your time or cash/materials donations)?**  
*Yes*
9. **Any other comments or concerns?**  
*None*

Thank you for taking the time to assist the Pennsylvania Environmental Council on this  
Trail/Greenway Master Plan Project





**Trail/Greenway  
Feasibility/Master Plan  
Key Person Interview Questions**

**NAME:** Karen Szwast  
**TITLE** West Side Trail Project Manager  
**ORGANIZATION** WST Commission

**1. What does your organization/business do (mission of the organization)?**

*The West Side Trail Commission provides for operation and administration of the West Side Trail and future recreational programming as the participating entities may agree.*

**2. Do you think a trail/greenway will benefit your organization/business? How or Why?**

*Yes, because the connection needs to be made between all local trails and the proposed Kingston Trails will provide the missing link. With this linking trail all West Side Trails will connect and through the usage of all bridges crossing the Susquehanna River, all West Side Trails will be connected to East Side Trails. The proposed trails will complete the trail connections in the Wyoming Valley.*

**3. Do you regularly use or promote the use of bicycle and pedestrian facilities?**

*The West Side Trail promoted the use of pedestrian usage of the trail by sponsoring an annual National Trails Day walk. WST is a Safe Routes to School Grant recipient and will have three local elementary schools participating in a walking school bus this year. There is much cycling activity along the trail sponsored by the privately owned Sickler's Bike Shop located on the WST.*

**4. What is your opinion on the current state of bicycle and pedestrian mobility in the region?**

*I believe the bicycling and pedestrian mobility in the region is increasing as people become more aware of the need for adequate exercise. There is a need to have a unified connection between the trails and an umbrella organization to promote the regional trail usage.*

**5. Do you think the area is in need of a trail/greenway? Why or Why not?**

*Yes, the area is in need of a connecting trail as previously explained.*

**6. What facilities/amenities or linkages should be included for a trail/greenway?**

*Trail heads, benches, bike racks, signage, trees*

**7. What concerns do you have about a trail/greenway?**

*None*

**8. Would you or your organization/business be interested in participating in the long-term management and maintenance of the trail (either through volunteering your time or cash/materials donations)?**

*The WST Commission may be interested in extending its Scope of Work towards Kingston if the municipalities involved agree to assist and join the West Side Trail Commission. The newly joining municipalities must also be agreeable to waiting until the currently*

*developed WST Master Plan construction is completed before any construction can take place in their towns.*

**9. Any other comments or concerns?**

*Education is a key component that needs to be continual to see consistent improvement in the active and healthy lifestyles of our families.*

**Thank you for taking the time to assist the Pennsylvania Environmental Council on this  
Trail/Greenway Master Plan Project**



**Trail/Greenway  
Feasibility/Master Plan  
Key Person Interview Questions**

**NAME:** Dale Freudenberger  
**TITLE** Heritage Projects Manager / Anthracite Heritage Alliance Coordinator  
**ORGANIZATION** Delaware and Lehigh National Heritage Corridor

**1. What does your organization/business do (mission of the organization)?**

*The Delaware & Lehigh National Heritage Corridor, Inc. is a 501(c)(3) non-profit that is building the D&L Trail and fosters stewardship of historical, cultural and natural resources along the historic canals and railroads that transported anthracite coal from mine to market in eastern Pennsylvania.*

**2. Do you think a trail/greenway will benefit your organization/business? How or Why?**

*It will benefit our organization greatly since it will eventually link with the 165 mile long D&L Trail which will extend from the Wilkes Barre / Kingston area south to Bristol, near Philadelphia. This trail system will also serve to connect communities, provide recreation, conserve natural areas, and preserve and interpret the rich history along the way which are goals shared by our both organizations.*

**3. Do you regularly use or promote the use of bicycle and pedestrian facilities?**

*YES – we routinely use and promote use of the D&L trail by bicyclists, walkers, hikers, joggers, pet walkers, etc., and in some areas, equestrian use of the trail.*

**4. What is your opinion on the current state of bicycle and pedestrian mobility in the region?**

*I think there is a need for many more areas where bicyclists and walkers can connect from town to town without the use of an automobile.*

**5. Do you think the area is in need of a trail/greenway? Why or Why not?**

*Absolutely! It encourages good health to users, conservation of natural and historical areas along the way, and provides alternative ways to beat the growing traffic congestion in the region. Development of the greenway and trail fosters more of an appreciation for the natural resources and beauty that exist in our region and are often taken for granted. It creates an important link between the waterways and natural areas and the core of our communities.*

**6. What facilities/amenities or linkages should be included for a trail/greenway?**

*It should be linked with other trails systems and greenways being planned or already constructed in the region, it should include interpretive signage all along the way, preservation of natural and historic resources found along the route, public access points that are properly signed, information kiosks at entry points, identified parking areas for users, bike racks, rules for use signage, handicapped accessibility, waterway access and should be designed for safe use by all.*

**7. What concerns do you have about a trail/greenway?**

*Finding funding to construct it.*

8. **Would you or your organization/business be interested in participating in the long-term management and maintenance of the trail (either through volunteering your time or cash/materials donations)?**

*If it is an area that we are able to do that, we would certainly do what we can to help or partner with others*

9. **Any other comments or concerns?**

*Thank you and keep up the good work!!!*

**Thank you for taking the time to assist the Pennsylvania Environmental Council on this  
Trail/Greenway Master Plan Project**



## **APPENDIX C: PUBLIC SURVEY**





## Greater Kingston Trail/Greenway Feasibility/Master Plan Project Public Survey

**1) Which municipality do you live in (please check one)?**

- ☐ Courtdale Borough  
☐ Kingston Borough  
☐ Pringle Borough

- ☐ Edwardsville Borough  
☐ Larksville Borough  
☐ Swoyersville Borough

- ☐ Forty Fort Borough  
☐ Luzerne Borough

Other (please indicate) \_\_\_\_\_

**2) Please indicate the number of individuals, including yourself, in each age group within your household:**

Adults

\_\_\_\_ 19-35 years  
\_\_\_\_ 36-55 years  
\_\_\_\_ 55+ years

Children

\_\_\_\_ 0-12 years  
\_\_\_\_ 13-18 years

**3) How would you use a trail/greenway? Check any of the following activities below:**

- ☐ Bike riding  
☐ Walking/running  
☐ Walking pets  
☐ Commuting to work  
☐ Commuting to school

- ☐ Shopping trips  
☐ Cross country skiing  
☐ Rollerblading  
☐ Skateboarding  
☐ Nature observation/birding

☐ Other \_\_\_\_\_

**4) Check any of the following amenities/design elements that you feel should be incorporated into a trail/greenway:**

- ☐ Information kiosks  
☐ Historical/interpretive signs  
☐ Directional trail signage  
☐ Mile markers  
☐ Shelters  
☐ Lighting  
☐ Benches (if yes, at what interval?)

- ☐ Fencing  
☐ Fishing access areas  
☐ Emergency phones  
☐ Picnic areas  
☐ Parking at trailheads  
☐ Restrooms

- ☐ Artwork (murals, sculptures)  
☐ Native plant landscaping  
☐ Bird houses  
☐ Pet waste disposal  
☐ Garbage cans

☐ ½ mile    ☐ 1 mile    ☐ 2 miles    ☐ Other \_\_\_\_\_

☐ Other \_\_\_\_\_

**5) Check any of the following areas that you would like to see connected to the Greater Kingston Area Trail/Greenway and if you have a specific site in mind please indicate the name(s):**

- ☐ Athletic fields \_\_\_\_\_  
☐ Schools \_\_\_\_\_  
☐ Parks \_\_\_\_\_  
☐ Businesses \_\_\_\_\_  
☐ Other trails \_\_\_\_\_  
☐ Residential areas \_\_\_\_\_  
☐ Historic sites \_\_\_\_\_  
☐ Public Buildings \_\_\_\_\_  
☐ Other \_\_\_\_\_

6) How often do you and/or would you use a trail/greenway?

☐ Daily   ☐ Weekly   ☐ Monthly   ☐ A few times a year   ☐ Not at all

7) At what times do you and/or would you use a trail/greenway?

	<u>Morning</u>	<u>Afternoon</u>	<u>Evening</u>
Weekday	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weekend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8) What type of trail surface would you prefer?

<input type="checkbox"/> Asphalt	<input type="checkbox"/> Natural earth
<input type="checkbox"/> Concrete	<input type="checkbox"/> Wood chips
<input type="checkbox"/> Crushed/Granular Stone	<input type="checkbox"/> Dual surface (hard and soft)

9) At what potential locations should trail heads be placed within your community? (Please list specific sites below).

☐ Schools \_\_\_\_\_

☐ Parks \_\_\_\_\_

☐ Municipal parking lots \_\_\_\_\_

☐ Libraries \_\_\_\_\_

☐ New construction \_\_\_\_\_

☐ Other \_\_\_\_\_

10) State and Federal grants are available to design and construct (Note: this typically takes 2-4 years) the proposed Greater Kingston Area Trail/Greenway, however the costs for management and maintenance will be the local communities responsibility. Would you be willing to use municipal tax dollars to support management and maintenance once the Greater Kingston Area Trail/Greenway is built?

☐ Yes   ☐ No   ☐ Unsure

11) Did we miss something? Please make additional comments below?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Thank you for your time in assisting the Pennsylvania Environmental Council by completing this survey.

**Please send this questionnaire back to PEC via mail, fax, or e-mail at the following address:**

Janet Sweeney Pennsylvania Environmental Council  
175 Main Street, Luzerne, PA 18709  
(Ph): 570-718-6507 (Fax): 570-718-6508 E-mail: [jsweeney@pecpa.org](mailto:jsweeney@pecpa.org)

**PLEASE COMPLETE TO BE ADDED TO THE MAILING DISTRIBUTION LIST:**

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
street city state zip

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_