

## **ANALYSIS OF EXISTING CONDITIONS**

Based on the preceding Inventory of Existing Conditions, the following analysis can be derived based on the potential rail-trail's consistency and compatibility with planning documentation, demographic and site conditions, and public health, safety and welfare considerations. Mapping of many of the characteristics and features identified in this analysis can be found in the Appendix of the Feasibility Study; these include the **Project Study Area, the Community Services, and the Land Use maps.**

### **Comprehensive Plan Compatibility**

Analysis of the collected information considered eight (8) planning reports compiled for the municipalities that this feasibility study affects, along with additional studies completed for Lancaster County. They are as follows:

- Proposed Park and Open Space Plan for Akron Borough
- Ephrata: A 2020 Vision Plan, Strategic Comprehensive Plan, Borough of Ephrata
- Ephrata Township Comprehensive Plan
- Park and Recreation Plan, Ephrata Township
- Warwick Region Comprehensive Recreation, Park and Open Space Plan
- Lititz/Warwick Joint Strategic Comprehensive Plan
- Greenway & Trail Feasibility Study, Borough of Lititz
- Lancaster County Bicycle & Pedestrian Plan: Phase II

Inevitably, these reports were completed at different times, but similarities in recommendations regarding greenways and trails indicate the following:

- Plan for acquisition and development of strategically located open space, that if developed, would provide evenly spaced, accessible recreation for all, ranging in size from small community parks through regional attractors.
- Steps should be taken to reduce the reliance on motorized vehicle trips throughout the County as a way to reduce traffic congestion and air quality concerns.
- Work with existing community special event providers to enhance and improve the event's opportunities.
- Public health statistics support the consideration of walking, biking, and other alternate forms of mobility as a means to improve the overall health of County residents.
- Encourage the municipalities to budget additional general fund dollars to support the operation, development, and maintenance of park areas and recreation facilities.
- Pursue and write grant applications for funding for park acquisition, recreation facility development, and staffing needs.

- Establish joint minimum standards of care (and annual costs related to same) for all public park areas and recreation facilities owned or operated by the municipalities and School Districts.

### **Potential Trail Alignment**

It is of importance to recognize that, when choosing potential alignment of a linear recreation corridor and transportation resource and when converting a former railway corridor, many of the undue impacts have already been dealt with. Invariably, the rail companies have already chosen the best route to suit their needs while parrying the very same conditions that would pose challenges to the development of the recreation corridor. Because of this, the following observations can be made:

- A. Grade/Climb limitations of locomotives dictated avoidance of steep longitudinal grades. This benefits recreational trail design in that steep grades would preclude physically challenged users from participating in the planned park and recreation activities.
- B. Typically, railroad engineers sought to avoid areas of poor drainage and flooding. Although, in cases, they have kept alignment along waterways as they pose little grade change. However, there was always significant grade separation. As a result, unused corridors today remain well drained and stable during significant storm events.
- C. Rail corridors could not always avoid passing in close proximity to developments or, in certain cases, spurred growth of an area, corridors remained relatively narrow and sometimes interacted with adjacent properties. This can encourage neighboring landowners to be more open-minded in acceptance to a rails-to-trails project.
- D. Because of safety and for ease of operation, rail companies sought to implement long, straight corridors that have flat horizontal curves, which permitted considerable sight distances. Safety is always an issue in creating a trail system, and this feature allows fairly easy patrol of the corridor and is conducive to a feeling of security for the user.
- E. When railroad engineers were faced with landscape anomalies, they imposed steep side slopes in cut or fill that fit within the acquired right-of-way and the construction budget of the rail company. These solutions create a great visual interest that contrasts to the flowing curves of the rail bed itself. Conversely, care must be taken to protect against interaction between users and steep slopes.

All of the above-described factors can be found in the potential Warwick Township to Ephrata Borough Rails-to-Trails corridor. As a result, the variety of potential corridor options, if not non-existent, are extremely limited. As a result, the trail designer for this potential project must seek ways to provide a satisfying experience throughout the

corridor. Much of the success of this corridor lies in the ability to create meaningful linkages within the areas surrounding the corridor.

**Potential Greenway and Trail System Connection to other trails, parks, community facilities, residential areas and the related constraints**

As noted above, one of the primary keys to the success of this potential linear recreation and transportation amenity is its ability to provide connections with varying, nearby facilities. To summarize the information included in the Inventory portion of this Study, the following opportunities for connections/linkages include the following:

- Cultural Features:
  - Eicher Arts Center
  - Ephrata ACT-Community Theater
  - Ephrata Borough Visitors Center
  - Ephrata Cloister
  - Ephrata Playhouse in the Park
  - Historic Downtown Ephrata
  - Historical Society of the Cocalico Valley
  - Lititz Borough Historic District
  - Lititz Borough Visitors Center
  - Lititz Historic Foundation Museum
- Destinations/Attractors:
  - Akron, Ephrata, and Lititz Borough Business Areas
  - Doneckers Complex
  - Ephrata Public Library
  - Ephrata Main Theaters
  - Erbs Covered Bridge
  - Hampton Inn/Applebee's Complex (Ephrata)
  - Kellers Mill/Rettew Mill Covered Bridge
  - Lititz Public Library
- Government Centers:
  - Akron Borough Hall
  - Ephrata Borough Hall and Police Station (located directly adjacent to the rail corridor.)
  - Ephrata Township Building
  - Warwick Township Municipal Campus and Police Station (located directly adjacent to the rail corridor.)
- Greenbelts/Trails:
  - Lititz/Warwick Trailway
  - Newport Square Trail System
- Hospitals/Retirement Facilities:
  - Ephrata Community Hospital
  - Ephrata Manor
  - Groves Assisted Living
  - Luthercare

Maple Farms  
United Church of Christ Home

- Parks/Recreation/Open Space:
  - Broad Street Park
  - Bethany Estates Park
  - Brickyard Park
  - Edgewater Meadow Park
  - Colonial Drive Park
  - Ephrata Recreation Center
  - Ephrata Mountain Park
  - Lincoln Heights Outdoor Recreation Area
  - Lincoln Heights Park
  - Lititz Lions Club Park
  - Lititz Springs Park and Borough Pool
  - Lloyd Roland Memorial Park
  - Moyers Meadow Park
  - New Street Park
  - Nissley Park
  - Redcay Playground
  - Riparian Park
  - Tom Grater Community Park & Pool
  - Volunteer Fire Company of Rothsville
  - Warwick Township Forney Polo Field Park
  - Warwick Township Lions Club Park
  - Warwick Township Municipal Campus Park
  - Westview Golf Course
  - 80's Lanes & Games
- Schools:
  - Akron Elementary School
  - Ephrata Area Rehab Services
  - Ephrata High School
  - Ephrata Middle School
  - Fulton Elementary School
  - Highland Avenue Elementary School
  - John Bonfield Elementary School
  - Kissel Hill Elementary School
  - Lincoln Elementary School
  - Linden Hall
  - Lititz Area Mennonite
  - Lititz Elementary School
  - Middle Creek School
  - Our Mother of Perpetual Help
  - Owl Hill Learning Center
  - St. Clement's Mission House
  - Warwick Middle School
  - Warwick High School

- Community/Developments:      Fulton Manor  
  Heritage Village

In addition to the above, approximately 40 churches lie immediately adjacent to or within one mile of the rail corridor.

Proposed cultural features, destinations/attractors, government centers, greenbelts/trails, hospitals/retirement facilities, parks/recreation/open space, and schools immediately adjacent to or within approximately one mile of the rail corridor (including features in Lititz Borough and West Earl Township) include the following:

- Greenbelts/Trails:               Ephrata Rail Trail (under construction)  
  Lititz Borough Greenway and Trail System  
  Little Creek Park  
  Lloyd Roland Park Trail System (expansion)

### **Existing ownership patterns, owner land management policies, and legal status**

The following summarizes the findings of the Township Managers, Township Solicitors, Farmland Trust Representative, Agricultural Preserve Board and the Consultant:

- A.     In most cases, the tracts of land adjoining the Rails-to-Trails corridor are operated and/or resided upon by their owner.
- B.     Six farms within Warwick Township have preservation easements held by the Agricultural Preserve Board that adjoin the Rails-to-Trails corridor. In addition, one farm in Warwick Township has a preservation easement held by the Lancaster Farmland Trust. Of these, several potentially impact the design of the trail as noted in **Appendix E** and **Map 8**.
- C.     The status of the claims to ownership of the Corridor appear to stand as follows:
  - 1.     Within Warwick Township, many of the deeds read that they run to the center of the right-of-way. This may be because the railroad, at its inception, purchased the right-of-way or a conditional right of access.
  - 2.     Ephrata Township presents the fewest potential obstacles because of the number of adjoining properties. Through the deed list, the Reading Railroad is listed as owning the right-of-way in variable widths through the Township.
  - 3.     Within Akron Borough most of the properties adjoining the right-of-way do not present any potential obstacles as the deeds read that they end at the right-of-way line. There are a handful of properties for which the deeds reflect ownership to the center (or thereabouts) of the right-of-way.

4. Ephrata Borough has begun the implementation of a new trail on the eastern-most portion of the feasibility study's limits. As a result, most of the adjoining property issues have been resolved. Only about eight properties within the Borough have not been affected by the trail being constructed. Any conflicts or issues that arise will be considered as part of this project's development.
- D. One outstanding issue that must be resolved is that of the discrepancy between the deed information and tax map records. According to the tax records, an individual named Pagnotti Enterprises (trading as Reading Company) processed a quit claim/quiet title action on the right-of-way and currently pays taxes on an extensive portion of the corridor.

### **Populations to be served**

Review of the participating Townships and Boroughs most recent comprehensive Plans, the following conclusions can be drawn:

- A. Inevitably, the density and demographics (age, gender, race, and income) of the participating municipalities varies, but relatively slightly. Ephrata Township holds the highest number of residents at or under the age of 18 (30.8%), while Akron Borough holds the highest number of age 65 and older residents (19.3%). (US Census Data 2000). <sup>(2) (5) (6) (10)</sup>
- B. Available demographic data shows that the median household incomes of the participating municipalities are very close to those of Lancaster County as a whole. When compared to the national average, all but Ephrata Borough place above average (US Census Data 2000).
- C. Naturally, the two participating Boroughs have the highest population densities, Ephrata Borough providing the densest population. Interestingly enough, Warwick Township has the highest number of households, meaning that there is a higher number of single-family homes as compared to multi-family dwelling units.
- D. Generally, there is a consensus that if populations grow as projected, there will not be enough open space to properly serve the public without forethought and decisive action. <sup>(2) (5) (6) (10)</sup>

Conclusions that can be drawn from this demographic data are that 1) a wide cross-section of the population would be served by a Rails-to-Trails facility, 2) due to the concentration of population, at least initially, more users would come from Ephrata and Akron Boroughs, 3) the potential exists that, in addition to families and youth, the typical trail user may also include retirement-aged persons, and 4) there is the need for planning for not only parks in different sizes and programming, but a way of connecting them. This connection could potentially offset the foreseen deficit by allowing more

opportunities for expansion of existing facilities and by providing the potential for the addition of new open space areas that would provide the capability for a range of programming, depending on what is seen as most desired.

### **Level of demand**

Based on the various community planning documents researched, the following conclusions can be derived:

- A. Residents from all participating municipalities expressed interest in connecting existing and improving/adding new passive recreation opportunities.
- B. In most cases, the opportunity of developing this rail-trail corridor was expressed as a desired development to be completed in the future.
- C. Specific insights for each municipality include:
  - 1. Warwick Township residents list hiking, jogging, and cross-country skiing as their favorite recreational pursuits. <sup>(4)</sup>
  - 2. Ephrata Township, as of their 1995 study, did not own any developed parkland or greenways. All parks/public spaces are owned and maintained by Ephrata Borough and the local school district. <sup>(10)</sup>
  - 3. Warwick Township noted that there is a lack of a strategic non-motorized pedestrian circulation system. <sup>(5)</sup>
  - 4. The Borough of Ephrata has identified the Cocalico Creek as an element of utmost importance to preserve as part of their open space network. Since the trail crosses this natural feature, there is an opportunity to connect the two corridors. <sup>(2)</sup>
  - 5. As a general rule, all participating municipalities have outlined the importance for a cooperative plan for linkages between residential areas, parks, stores, schools and other community facilities. These, in turn would provide a comprehensive, all-encompassing connection to most, if not all, recreational facilities.
  - 6. Akron Borough has identified the Lloyd Roland Park as one of its most valuable assets and is looking at expanding it to provide additional trails and to preserve woodlands that may represent the oldest growth within their municipality. <sup>(1)(6)</sup>
  - 7. Although a jitney-type transportation service was identified for potential future development in Ephrata Borough that could potentially be

integrated with the rail-trail, no activity is underway relating to development of same.<sup>(2)</sup>

It is readily apparent that the survey results from the communities' planning documents conclude that, aside from needing additional recreation facilities, trail-related recreation and linkages are needed, will be used, and should be provided by the municipalities. Community growth, being in the forefront of the minds of community officials and planners, is something to anticipate, for which adequate park/recreation facilities should be planned.

### **Applicable historical/cultural and environmental education along the corridor**

The corridor offers the following unique interpretive opportunities:

#### **A. Historical/Cultural:**

1. Several examples of historic and cultural architecture are near or adjoin the corridor, or did at one time, and are of enough importance to make note of. The structures that still exist today could be interpreted through signage and descriptions of their importance and role in each community's development. Some of these are as follows:
  - a) Old stone house on Millway Road
  - b) Train Station in Akron
  - c) Jacob Keller House (National Historic Register)
2. The historic downtowns and designated districts of Lititz Borough and Ephrata Borough.
3. As identified in **Appendix A**, the Pennsylvania Historical and Museum Commission (PHMC) was requested to perform a Historic Resources search for the right-of-way property. The Commission's conclusion was that while they didn't think that the project, if completed, would pose any risk to historic resources, they could not give a definitive answer until the full extent of the project is known.

#### **B. Environmental:**

1. Should the unnamed tributary that the corridor crosses, via the culvert be mitigated, it would present an opportunity for education and interpretation to trail users.



2. Animal habitats could provide an area for interpretation. Natural habits and characteristics of the various species of fauna and flora within the corridor and surrounding areas could be studied.
3. Vegetative growth presents a variety of ways of interpretation within the corridor. Volunteer tree growth on side slopes shows the tenacity of nature and of particular species. Mature trees can be used to develop natural timelines that correlate with the railroad's and the region's history. Since around half of the trail passes farm land, the methods of farming, such as crop rotation and other methods of farming to sustain our ways of life are open for illustration and interpretation.
4. As identified in **Appendix B**, the Pennsylvania Natural Heritage Program provided a Pennsylvania Natural Diversity Investigation (PNDI) search for any endangered flora or fauna that is present within the rail corridor. The results of that investigation show no potential conflicts for development of the potential rail-trail.

The success of the interpretation of these outlined aspects of the corridor lies in the cooperative efforts of those that the trail affects, including the participating municipalities and supporting organizations (i.e. museums, historical societies, and the like).

#### **Physical Characteristics of Trail**

- A. Portions of the corridor may be located in hydric or unstable soils, but should pose little problem as the rail corridor has been previously improved.
- B. Steep slopes pose a safety as well as access concern in some areas. As a general rule, where the rail bed is above grade, slopes are relatively steep to each side. In these areas, fence as detailed on **Figure 2** will have to be in place to control/prevent access to unsafe slopes. Some instances of cut exist where rock face is exposed. Adequate space between the trail and rock face should be proposed to prevent concerns from falling rock. This space can be defined clearly through the use of fencing, signage or vegetative planting.
- C. Sections of the corridor adjoin rear yards of residences and have become a drainage way. Remediation will be needed and, when done, will provide a better means of draining the contributing areas.
- D. Overgrowth has taken over areas and could be easily cleared with little damage or cause of erosion.
- E. Wetlands and stream crossings are evident at several locations along the corridor, but will not compromise the trail as structures were implemented by rail engineers when the rail bed was established. Some of the structures are in need of minor repairs (i.e. re-pointing).

