

MANCHESTER TRAILS

REGIONAL

A. Concept

This is a developing case study for the completion of the trail system in the Manchester, New Hampshire region prepared for the Rails to Trails Conservancy. This case study is supported and submitted by a variety of community organizations in the region.

The Manchester area has an excellent system of former rail lines that interconnect the region and connect to other regions of the State and New England. As portions of these rails have been converted to trails, the general population has become enthusiastic about a fully completed and interconnected trail system.

The trails increasingly serve as a transportation connection between residential areas and commercial and institutional areas. As such, the trails can serve as an alternative to traditional automobile trips, thus serving to shift a percentage of the transportation mode choices in the region. The evidence of significant health benefits of walking and riding bicycles are mounting. The City's Health Department has begun to take an active role in encouraging this form of transportation and supporting efforts for trails and improved walk ability of the City. Obesity is one of the larger health issues of the country and trails can provide exercise which is one of the means of controlling this issue.

The Manchester Region includes the City of Manchester and six surrounding towns including Goffstown, Bedford, Londonderry, Auburn, Derry and Hooksett. Several of the communities have begun to develop trail systems in their areas. The proposed regional trail system would interconnect these trails to provide recreational and transportation alternatives throughout the area.

While progress has been made and the communities have recognized the importance and benefits of the trail systems, movement has been slow and it could take another 30 years to complete the system at the present rate. Given the benefits of the system, a much quicker implementation would be the ultimate goal of the communities. The primary stumbling block has been funding for the system. A variety of funding mechanisms have been used such as Transportation Enhancement and CMAQ funding from Federal programs, local governmental funds, private donations and volunteer efforts.

The communities would benefit from an accelerated Federal funding program that would complete the trail system within 5 years.

B. Background

The City of Manchester, with the help of civic-minded organizations such as ManchesterMOVES, is developing a Master Park and Trails Plan (a DRAFT of which is included in this report) with the intention of linking all of our recreation parks and commercial areas with trails and marked pedestrian/bike ways. By doing so we expect that many more people will take to the trail system to commute not only to our parks and schools but also to work and for small shopping trips.

This has already proven successful in a short section of the abandoned Manchester Lawrence Rail line that has been converted to a bike/pedestrian walkway. This small 1.25-mile section of trail succeeded in connecting a large residential neighborhood representing approximately 3000 residents that directly abut or live within 3/10's of a mile of the trail with a large Soccer and Baseball complex (that could not contain all of the parking necessary for the people attending events held at the facility), 2 large shopping plazas, a school, Post Office, and when completed an industrial park, and the Manchester/Boston Regional Airport. Senior citizens are using the trail to commute to a large grocery store and strip mall for light shopping. It is estimated that this small section of trail alone is responsible for eliminating more than 200 short commutes in an automobile per week and is being utilized by more than 3000 people per week for commuting and/or recreational purposes!

In addition the health benefits being enjoyed by our young children, families, senior citizens as well as the physically challenged users are almost immeasurable. In fact many senior citizens have formed walking clubs to enjoy the health benefits of the exercise and outdoor air together. At any given time it is not unusual to see an elderly person in a wheel chair or on a bicycle with a bag of groceries on their way back home! Families have taken to this trail en masse as a way to recreate as a family, and to teach children in a safe environment how to ride their bicycles and enjoy quality healthy time with each other.

1. Focus Area

As indicated previously, the Manchester region is considered to include the City of Manchester and six surrounding towns including Goffstown, Bedford, Londonderry, Auburn, Derry and Hooksett. The total population of the focus area is approximately 220,000, with the City of Manchester accounting for approximately half of that total.

2. Current Transportation System

The region's transportation system is typical of other American regions. The primary reliance is on the automobile, with a low percentage of trips by public transit, walking or by bicycle. As can be seen on the adjacent chart (furnished by the Southern New Hampshire Planning Commission), driving alone was by far the primary mode of transportation with over 80% of the commuting trips. Carpooling and public transit use was highest in Manchester (which would be expected), but still relatively low compared to driving alone.

| Town | Mode of Travel (%) | | | | | |
|-------------|--------------------|------------------|--------------------------|---------------|--------------------|-----------------------|
| | <i>Drove Alone</i> | <i>Carpooled</i> | <i>Public Transport.</i> | <i>Walked</i> | <i>Other Means</i> | <i>Worked at Home</i> |
| Auburn | 87.9 | 6.8 | 0.4 | 0.3 | 1.3 | 3.3 |
| Bedford | 86.0 | 5.4 | 0.3 | 0.5 | 1.5 | 6.3 |
| Candia | 86.5 | 9.4 | 0.5 | 0.3 | 0.2 | 3.1 |
| Chester | 84.2 | 6.8 | 1.2 | 0.6 | 0.0 | 7.2 |
| Deerfield | 86.6 | 7.8 | 0.0 | 1.0 | 0.3 | 4.3 |
| Derry | 84.9 | 9.7 | 0.8 | 1.4 | 0.6 | 2.7 |
| Goffstown | 81.7 | 8.5 | 0.1 | 4.8 | 1.3 | 3.6 |
| Hooksett | 82.0 | 8.8 | 1.6 | 3.6 | 0.4 | 3.6 |
| Londonderry | 86.3 | 7.9 | 1.3 | 0.6 | 0.7 | 3.2 |
| Manchester | 81.0 | 11.9 | 1.4 | 2.9 | 0.7 | 2.2 |
| New Boston | 82.4 | 10.5 | 0.5 | 1.3 | 0.6 | 4.7 |
| Raymond | 83.7 | 12.3 | 0.2 | 1.5 | 0.2 | 1.9 |
| Weare | 81.6 | 11.5 | 0.4 | 2.1 | 0.4 | 3.9 |

Source: U.S. Census 2000

The second table compares American driving habits with those of several other industrial countries (please note that the two tables are not exactly comparable as the first is for commuting trips while the second is for all trips). While the United States had driving rates of over 80%, most

| Country | <i>Bicycle</i> | <i>Walking</i> | <i>Public Transit</i> | <i>Car</i> | <i>Other</i> |
|---------------|----------------|----------------|-----------------------|------------|--------------|
| Netherlands | 30 | 18 | 5 | 45 | 2 |
| Denmark | 20 | 21 | 14 | 42 | 3 |
| Germany | 12 | 22 | 16 | 49 | 1 |
| Switzerland | 10 | 29 | 20 | 38 | 1 |
| Sweden | 10 | 39 | 11 | 36 | 4 |
| Austria | 9 | 31 | 13 | 39 | 8 |
| England/Wales | 8 | 12 | 14 | 62 | 4 |
| France | 5 | 30 | 12 | 47 | 6 |
| Italy | 5 | 28 | 16 | 42 | 9 |
| Canada | 1 | 10 | 14 | 74 | 1 |
| United States | 1 | 9 | 3 | 84 | 3 |

Source: Pucher, 1997

of the other countries have rates of under 50%. America of course has developed on an automobile oriented economy, but the Chart does show that other countries with equal rates of industrialization and equal or higher rates of per capita income can operate with far less auto dependency.

Even a modest mode change of 5% would have significant and positive impacts (with driving rates still significantly higher than the other countries). *Such a modest 5% change would, each year,*

save the Manchester region 1.8 million gallons of gasoline, \$6,700,000 in fuel costs and prevent 17,900 TONS of Carbon Dioxide from being emitted into the atmosphere.

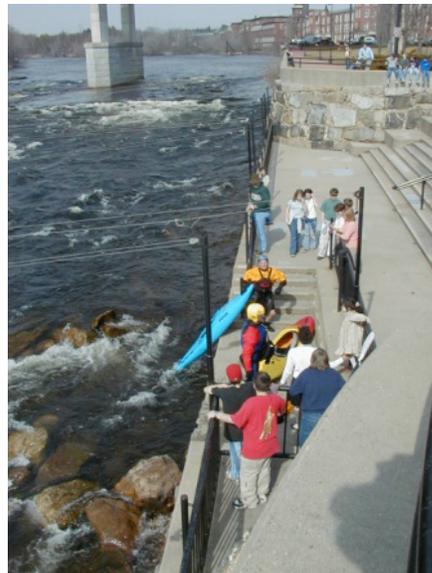
3. Current Regional Development Patterns

The regional development patterns mirror those of many other areas of the country. While there are certain concentrated cores that are still walkable and bikeable such as in Manchester and Derry (and in the original village centers of the other towns), most of the new development over the past 50 years has been suburban in nature with strip commercial development, low density residential sprawl and outlying industrial parks. This new development has not been conducive to walking or biking and has placed a significant reliance on the automobile as the primary source of transportation. In the Manchester region, however, this trend is not irreversible. With a combination of revised land use development patterns, more alternative transportation options and a comprehensive trail system, the pattern can be reversed and a mode shift in transportation can be made.

4. Organizations Involved in Trail System Development and Management

The following is only a partial list of the Local and Regional volunteer and Non Profit groups that are currently involved in fund raising, creation and maintenance of many of the Trail initiatives already underway in the region. Many of these groups rely on Federal grants, local government funding as well as large corporate and philanthropic donations to build and help maintain these necessary trails and paths. Without Federal Grants and funding many of these trail systems would not exist in these economically tough times.

- Queen City Trail Alliance
- Granite State Trail Conservancy Manchester Regional Trail Alliance
- City of Manchester Parks and Recreation Department
- Town of Goffstown Parks and Recreation Department
- Town of Derry Parks and Recreation Department
- Friends of the Goffstown Trailways
- Windham Rail Trail Group
- Derry Rail Trail Group
- Granite State Wheelman
- Londonderry Trailways
- Salem Biking and Pedestrian Trail Group
- National Rails to Trails Conservancy



*A portion of the Riverwalk
along the Mill Section of the
Merrimack River*

5. Trails Progress to Date

It is important to point out that Manchester is not only an important hub in connecting the Southern Bike/Ped Trail System with the East, West and Northern NH Bike/Ped trail initiatives, but it is also a major destination. Being the largest city in the state of NH, as well as the home of the Industrial Revolution back in the 1800's, the Manchester Millyard railroad system connects with almost every major rail line in the east. Most of these lines are now abandoned and screaming to become Bike/Ped Rail Trails. These abandoned lines travel in most cases directly through the center of our most populated cities and towns with little or no hills or inclines...making them a perfect alternative to any person wishing to utilize a more efficient and healthy mode of transportation to get to work, go to school, go shopping, get to a ball game, or just get some exercise and family recreation.

In Manchester alone, our proposed trail system would link 5 colleges, 3 high schools, 4 elementary and Middle Schools, the Downtown area, a number of commercial shopping plaza's and malls, 2 industrial parks, and a regional Post Office. It also boasts connectivity with more than 10 restaurants, the Manchester/Boston Regional Airport, 3 hotels located in the Manchester/Boston Regional Airport, 3 additional hotels located in Downtown Manchester, the Verizon Wireless Arena and the Fisher Cat Stadium hotel and retail complex, the Millyard, Center City, 3 ponds, a lake, the Audubon trail system and more than 12,000 residences or approximately 50,000 people that directly abut or are within 3/10th's of a mile of the proposed and completed trail system.

Combine that with all of the cities and towns that have trail systems that go through their own areas and connect with the Manchester system and you will begin to see the scope, size and impact that completing these systems could have on shifting our mode of transportation, helping to control the smog and air pollution caused by motorized vehicles within city limits as well as the benefits to our economy and the health of our residents! With almost all of the main rail trails starting, ending, or connecting in the Manchester Millyard it gets easier to see why it makes sense for Manchester to take the lead in the regional planning of the Southern NH Trail system.

To say that the current regional pattern towards trail development in Southern NH is alive and exciting would be an understatement. Here are just a few of the current projects already underway:

Salem NH:

Studies and engineering plans are being developed to convert the abandoned Manchester / Lawrence Railroad bed to a Bike/Pedestrian Trail that will connect with the completed trail in Windham and could eventually travel south to Lawrence, Massachusetts.

Windham, NH:

An active group has completed and is maintaining its portion of the North/South 4.1 Mile Lawrence/Manchester Rail bed as a Bike Pedestrian Rail Trail. In the planning stages is the Windham greenways project that could eventually connect Windham to Nashua and Rochester via the East/West Worcester, Nashua, Rochester Railroad line.

Derry, NH:

Utilizing the Manchester/Lawrence abandoned rail bed, Derry has completed approximately 1 mile of paved rail trail with phase two in the planning stages to create approximately 2 more miles and completing the connection to Windham. Derry is also working on the planning and designs for the completion of the Trail heading north to Londonderry.

Londonderry, NH:

The town is actively studying and planning the creation of its portion of the Manchester/Lawrence Rail bed to connect to Manchester and Derry. Londonderry has several local trails that are maintained and created by the Londonderry Trailways organization.

Manchester, NH:

The South Manchester Rail Trail has completed approximately 1.25 miles of trail on the Manchester/Lawrence rail bed bordering Nutt's Pond and Cohas Brook, with an additional 2 miles of this bed in various stages of completion, and will eventually connect Londonderry to the Manchester Millyard.

The most important link in the Manchester/Lawrence Rail Trail, this trail will eventually connect Londonderry, Derry, Windham, and Salem with a paved bike/pedestrian trail that was also identified by the I-93 widening feasibility study as the preferred route for an alternate mode transportation bike path. Due to its neighborhood connections, accessibility, and connections to the proposed park and rides to be completed with the new Interstate 93 highway widening project, this particular trail has the distinct possibility of becoming one of the most widely used alternate mode bike/ped trails in the country.

This rail trail will not only offer many residents and patrons the opportunity to travel to and from work, commercial shopping areas, schools and parks on a bicycle instead of a motor vehicle, but in many cases will actually decrease their commute times because of the direct route offered from one area to the next. For example a person traveling by car from the Millyard in Manchester to the regional post office on Goffs Falls Road would have to travel approximately 10 miles and 20 minutes by car through the city to get there. If traveling on a bicycle the same trip would be approximately 3 miles and take 10 minutes on the finished proposed trail! By using this trail system and avoiding the congestion and round about ways that our current roads offer we will not only be able to cut some of the congestion on our city streets, we will also be building a healthier and more vibrant population.

The City of Manchester is also in the process of completing approximately 1.5 miles of Rail trail on the Piscataquog Rail trail, linking the Manchester Millyard to the Goffstown Rail Trail. This trail, which is fully funded with a scheduled start date of spring 2009, will cross the Merrimack River, travel through the West side of Manchester and across the Piscataquog River into Goffstown and eventually New Boston. This trail when completed will connect directly or very close to a major hospital (Catholic Medical Center), two high schools (Manchester West High and Goffstown High School), the West Side Ice Arena, West Manchester Softball field complex, 2 Goffstown recreational areas and ball parks, Glen Lake, 3 different densely populated residential areas with a population totaling more than 10,000 residents. It will also travel through a number of commercial shopping and industrial work areas, including the Manchester West Millyard, Canal Street Millyard, Riverwalk, Fischer Cat Stadium and Hilton Hotel joining up with the Manchester/Lawrence Rail Trail, the Rockingham Rail Trail, and the proposed Manchester to Concord Rail Trail in the Manchester Millyard Trail Hub. The City is studying the creation of an additional Bike Pedestrian trail utilizing in part the abandoned Rockingham Rail bed. This trail when completed will link the Manchester Millyard through the center city linking a large walking and immigrant population directly with 2 high schools, 1 elementary school, 1 middle school, many parks, Massabesic Lake, The Audubon Society trail system, Auburn, Candia, Chester, Epping, Exeter, Stratham all the way into Portsmouth. A small portion of this trail will be completed this year.

C. Fundamentals of Mode Shift Change

Ultimately, mode shift in transportation requires several other components besides a fully functional trail system. These include an integrated alternative transportation system that is useable year round, changes to land development patterns that place less reliance on the automobile as the primary transportation mode, and more walkable communities.

1. Integrated Alternative Transportation System

An integrated alternative transportation system provides access to a variety of transportation modes in a seamless and integrated manner. The proposed Master Plan for the City of Manchester has a section on such a system. The trail system becomes a major component along with both inter-city and intra city bus systems, a commuter rail connection to Boston and to the Amtrak system which can access points nationwide, and a connection to the Manchester Boston Regional Airport. The system would integrate at a number of places but includes a multi-modal hub in the downtown area. This location would also be the hub of the trail system. The Alternative Transportation System section of the Master Plan is identified on the following page.

2. New Approach to Land Development and Site Design

Over the past 70 years, land development patterns and the Zoning provisions that create them have led to significant reliance on the automobile as the primary and sometimes the only form of transportation available. Zoning ordinances have sectioned communities into distinct districts such as residential, commercial, industrial and institutional uses that segregate uses by sometimes large distances. Site design has also placed the automobile first by requiring a minimum number of parking spaces and placing the parking in the front of the use which limits the potential for walking or bicycling. New forms of development and regulations are needed, such as mixed use developments, which can accommodate automobiles, but do not place them as the only source of transportation.

3. Walkable Communities

In addition to the alternative transportation system and the new approaches to land development, the communities in the region will have to become more walkable in general. This primarily includes the provision of sidewalks in the more densely developed areas with appropriate connections to the trail system. Walkable communities also require that there be destinations within each neighborhood that can be walked to such as parks, convenience stores, schools, neighborhood services and institutions such as museums.

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