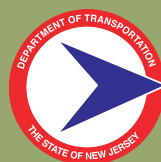




Planning for Greenways

A Guidebook for New Jersey Communities

Prepared for:



TOGETHER
**NORTH
JERSEY.**

Prepared by:

NIV|5

NOVEMBER 2019



Cover Photo: Morris Canal Greenway, Jersey City, Hudson County, NJ
Photo: Middlesex County Office of Parks and Recreation

Middlesex Greenway, Middlesex County, NJ

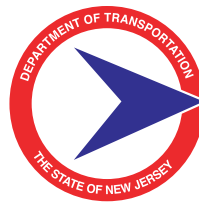


Together North Jersey (TNJ) was created in 2011 to develop the first comprehensive plan for sustainable development for North Jersey. The TNJ planning effort brought together a coalition of nearly 100 diverse partners – counties, municipalities, educational institutions, nonprofits, businesses, and other stakeholders – to develop the TNJ regional plan. The TNJ planning process identified a shared vision for a sustainable future for North Jersey consisting of four themes: Competitive, Efficient, Livable, and Resilient.

This guidebook is a demonstration project of the Livable Task Force, which works to realize the vision of creating healthy, safe, inclusive, and vibrant places to live, work, play, and raise a family.

The TNJ planning region consists of the 13 counties in the NJTPA planning area: Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.

Prepared for:



New Jersey Department
of Transportation



Together North Jersey
Livable Task Force

Prepared by:



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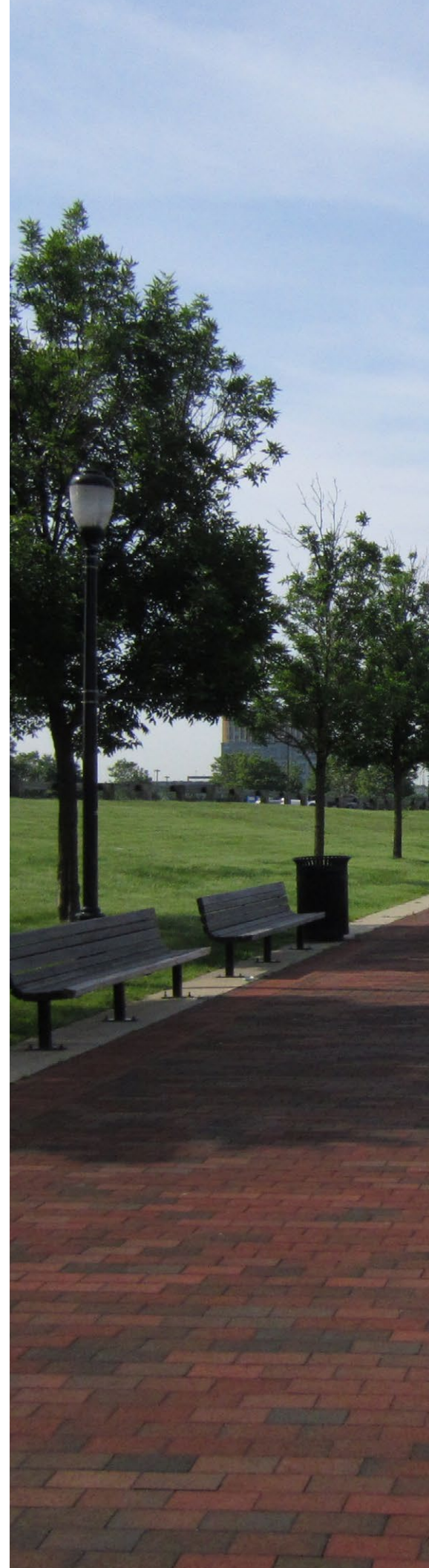


Table of Contents

1. Introducing Greenways	3
<i>Lays the foundation for the Guidebook, which addresses development of greenways that include shared use paths.</i>	
What is a Greenway?	4
Why Develop Greenways?	10
Finding the Green in Greenways	13
New Jersey's Growing Greenway Networks	16
2. Getting Organized and Building Support	19
<i>Outlines the first steps in the greenway planning process. Knowing who to involve, how to build support and where to get assistance sets the stage for greenway development.</i>	
Who is Involved in Greenway Planning?	20
Forming a Task Force or Advisory Committee	24
Building Community Support	25
Finding the Money and Looking Ahead	29
3. Greenway Development Process	35
<i>Describes the components of greenway development and includes tips and resources for each stage.</i>	
Act 1: Get Started and Gain Traction	37
Act 2: Prepare a Concept Plan	40
Act 3: Design Development, Engineering, and Construction	46
Act 4: Activation, Operations, and Maintenance	51



Glassboro/Williamstown Bike Path, Gloucester County, NJ

1. Introducing Greenways

Interest in greenways for walking and bicycling is on the rise in New Jersey. More and more municipalities and counties are embracing greenways as a strategy for creating more walkable, bikeable, and sustainable communities. They recognize that establishing greenways is a useful and cost-effective tool for addressing a wide range of community issues. Greenways can help to protect and connect open space, mitigate environmental impacts of development, and provide places for close-to-home recreation. Greenways with paths for walking and bicycling can serve as transportation corridors connecting people and places. Some are tourist destinations that boost local economies.

Through the combined efforts of municipalities and counties and with support from the public, grassroots groups, nonprofit organizations, and government, greenways are linking up to form regional networks that cross jurisdictional boundaries. Conservation and recreational greenways establish systems of preserved open space and parks; greenways with multiuse paths are becoming part of New Jersey's network of transportation facilities. Greenways typically serve multiple functions. They are places where conservation, recreation, and transportation functions come together to form intertwined systems of preserved land, parks, and transportation corridors.

THIS GUIDEBOOK GIVES A SNAPSHOT OF THE GREENWAY DEVELOPMENT PROCESS FROM START TO FINISH.

This guidebook focuses on greenways with paths for walking or wheeled transportation and is tailored to help grassroots groups, nonprofit organizations, and government staff better understand the development steps from concept to ribbon-cutting. It is not a technical or design guide, but an overview to orient newcomers to the development of transportation greenways that have conservation and recreational value.

THIS GUIDEBOOK REFERS TO MANY ORGANIZATIONS IN NEW JERSEY AND BEYOND THAT OFFER IN-DEPTH INFORMATION AND A WEALTH OF RESOURCES ON DEVELOPING GREENWAYS.

There are many newcomers to greenway planning in New Jersey who are unfamiliar with the process of establishing greenways or where to find information and support. Extensive guidance is available from federal, state, and regional governments, and nonprofit organizations that covers every aspect of greenway development, design, and research on greenway benefits. The scope and volume of information can be daunting.

THIS GUIDEBOOK DRAWS ATTENTION TO NEW JERSEY’S GREENWAYS AND EMERGING NETWORKS THAT ARE MAKING NEW JERSEY’S COMMUNITIES MORE LIVABLE AND SUSTAINABLE.

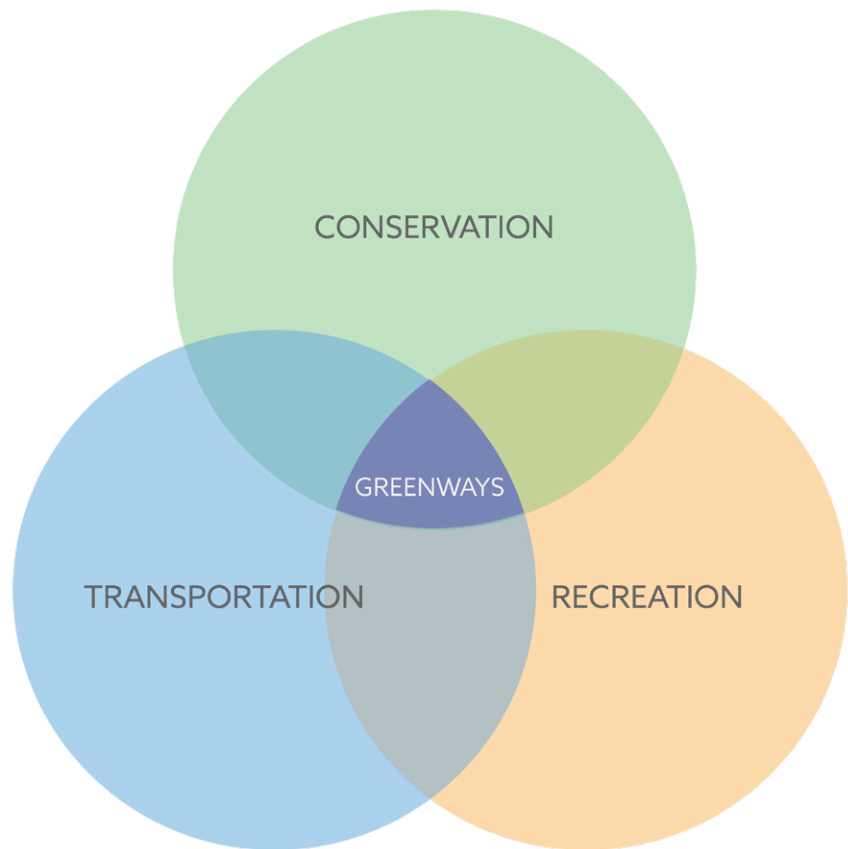
Many New Jersey greenways are already well established; others are somewhere between concepts on the drawing board and ribbon-cutting. Those who are working to establish greenways in their communities will find that there is strong support from New Jersey agencies and organizations, and many examples of successful greenway development to draw on for inspiration and guidance.

What is a Greenway?

The term “greenway” is used to describe many types of preserved linear corridors in rural, suburban, and urban communities. Whether they are short neighborhood greenways or long distance multi-state greenways, they are located, established, and designed to serve a range of environmental, recreational, and transportation purposes.

Some greenways are vegetated corridors preserved for ecological benefits. They can connect fragmented natural areas to achieve conservation objectives such as protecting wildlife habitat or water quality in streams and rivers. Others serve as linear parks with hiking trails and recreational facilities. They can be located to connect parks and neighborhoods. Greenways with bicycling and walking paths are often used for transportation purposes, connecting people to community destinations and attractions.

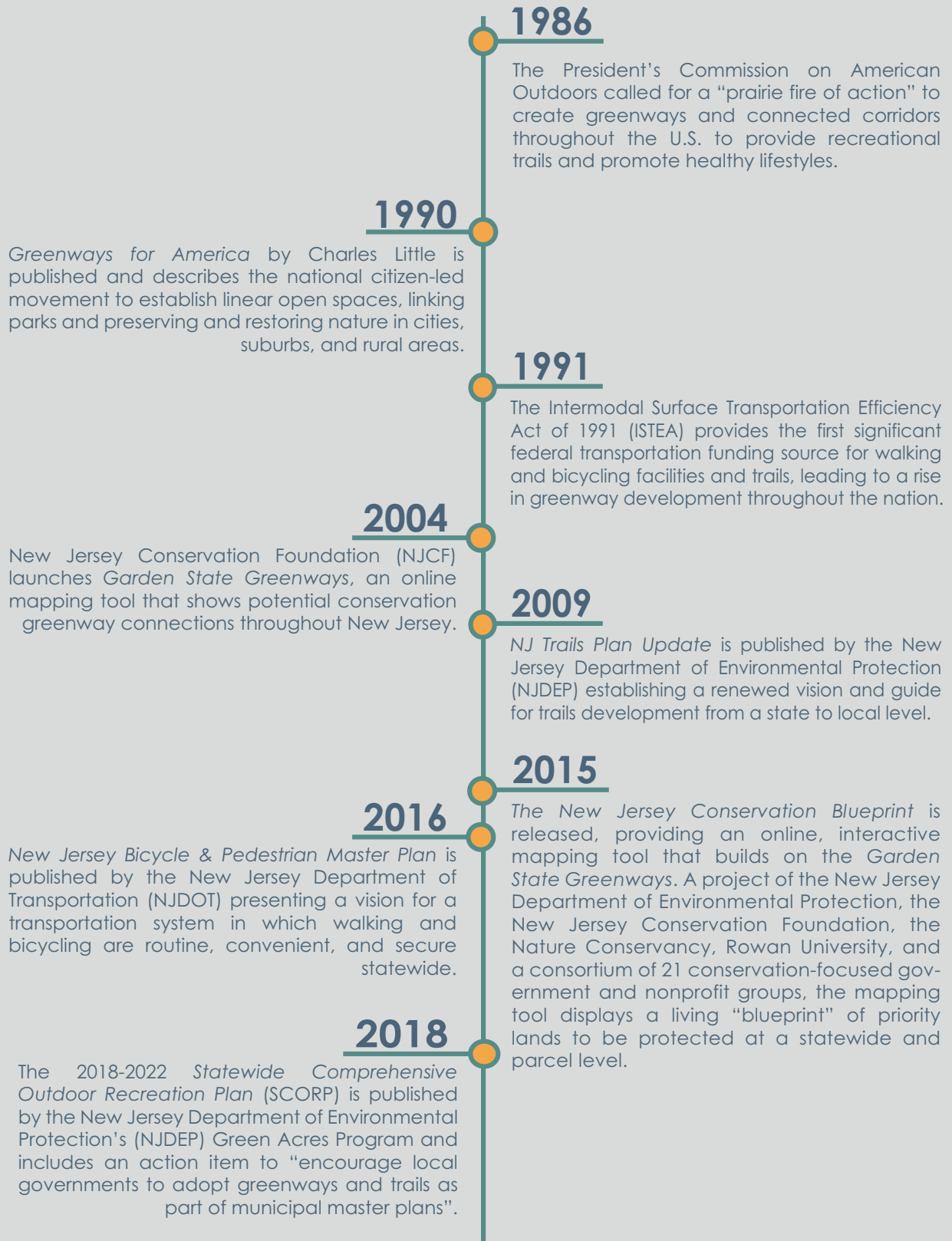
However, greenways typically serve multiple functions and are designed to achieve a combination of environmental, recreational, and transportation objectives in varying degrees. This guidebook focuses on greenways with transportation utility.



Transportation Greenway:
A linear corridor with environmental, recreational, and transportation utility that includes a shared use path for walking, bicycling, and other non-motorized uses

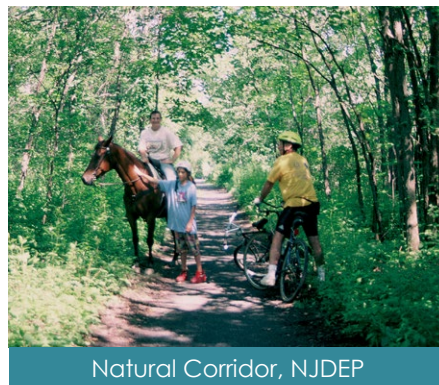
Greenway Milestones

A few significant markers over the past four decades that spurred the greenway movement nationally and in New Jersey

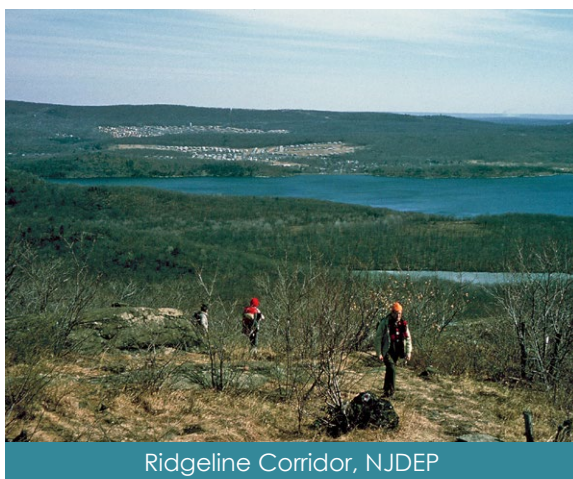


GREENWAY CORRIDOR TYPES

Greenways may follow natural corridors such as streams, rivers, and ridgelines – with or without trails – or constructed corridors such as former or active railroads, canal towpaths, utility corridors, and roads with trails. Some may include historic sites with stories to convey about their place in New Jersey’s history.



PROTECTED GREENWAY CORRIDORS MAY OR MAY NOT INCLUDE TRAILS, DEPENDING ON THEIR PURPOSE AND CHARACTERISTICS.



CHARACTERISTICS

Greenways follow corridors that are separate from roads except for intersections where their paths cross. However, in a state as developed as New Jersey, on-road connections between off-road segments are often necessary because of gaps in the alignment. Connections to local destinations necessarily follow roadways that should be designed to safely accommodate walkers and bicyclists.

FIRM SURFACE

Shared use paths used for transportation have firm surfaces to accommodate users of all ages and abilities. Firm surfaces are good for wheeled transport, such as bicycles, skateboards, wheelchairs, and strollers, and are acces-

sible to people with disabilities. Information on soil cement, resin-based stabilized material, recycled materials, and other firm surfacing materials are available from many manufacturers.

CONNECTIONS

Greenways connect people with places. They serve as the spine of local walking and bicycling networks that provide important connections to community destinations such as parks, neighborhoods, schools, downtowns, shopping centers, transit stops, and local attractions. Connections to restaurants, bicycle shops, and other support services for greenway users will help to bring business to local communities.



Colonial Park, Somerset County, NJ

WALKABILITY AND BIKEABILITY

Measures of walkability and bikeability consider the distances people are typically willing to walk or bicycle to reach a destination. Although estimates vary, a 1/8- to 1/4-mile walk (5 to 15 minutes) or up to 5 miles on a bicycle (20 minutes) have been used as benchmarks, depending on local context. Routes from a greenway to public destinations should be designed to safely accommodate greenway users.

Connect to ...



Keyport, NJ

Schools



Keyport, NJ

Attractions



Henry Hudson Trail, Keyport, NJ

Greenways



Keyport, NJ

"Main Streets"

Greenways and Shared Use Paths

Shared use paths are designed to meet specific engineering criteria for bicyclist and pedestrian safety. *The Guide for the Development of Bicycle Facilities*, 2012, published by the American Association of State Highway and Transportation Officials (AASHTO) defines a shared use path as: "...a bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users."

Making Greenway Connections On-Road

When greenway alignments cannot be continuous because of development or other issues, on-road connections will be necessary to connect the segments. Greenway connectors will also be needed to provide access to community destinations.

APPROPRIATE DESIGN TAKES INTO ACCOUNT ANTICIPATED USES AND USER VOLUMES, PHYSICAL CONDITIONS, AND CONTEXT.



Princeton, NJ



Morristown, NJ

Greenways with shared use paths and on-road connectors are part of the larger transportation network of streets and sidewalks. All streets connecting greenway segments and community destinations should be designed to safely accommodate bicyclists and pedestrians.

Bicycle lanes, sidewalks, and crosswalks are often the first facilities that come to mind when considering on-road greenways. However, there are many types of designated facilities that "fit" a wide range of roadway configurations and contexts. Regardless of the approach, both independent and on-road connectors should be safe, convenient, and comfortable for people of all ages and abilities – from eight to eighty.

Experienced bicyclists may feel confident riding on-road. Those with moderate experience will be more comfortable, and more likely to choose to bicycle the further facilities are from travel lanes and motorists.

Most Comfortable



Shared Use Path



Side Paths



Separated Bike Lane



Buffered Bicycle Lane



Standard Bicycle Lane



Shared Lane Markings

Least Comfortable



BICYCLE FACILITIES FROM MOST TO LEAST COMFORTABLE

- Greenways with shared use paths
- Side Paths (dedicated facility adjacent to roadways)
- Separated Bicycle Lane (dedicated facility separate from travel lane)
- Buffered Bicycle Lane (dedicated facility buffered from travel lane)
- Standard Bicycle Lane (adjacent to travel lane)
- Shared Lane Markings (Sharrows)

Complete Streets

Complete Streets are roads designed for safe and convenient travel along and across streets for people of all ages and abilities - pedestrians, bicyclists, motorists, movers of commercial goods, and transit riders. Many New Jersey municipalities and counties have passed Complete Streets resolutions and policies. Implementing Complete Streets means changing the way transportation investments are made. The goal is that all on-road greenway connectors are on Complete Streets.

USEFUL RESOURCES

NJ Bicycle and Pedestrian Resource Center,
NJ Safe Routes to School Resource Center,
Voorhees Transportation Center,
Rutgers University

National Complete Streets Coalition (NCSC), a
program of Smart Growth America

*Complete & Green Streets for All, Model Complete
Streets Policy & Guide*, 2019, NJDOT

*2017 State of New Jersey Complete Streets
Design Guide*, NJDOT

New Jersey Bicycle & Pedestrian Master Plan,
2016, NJDOT

*Missing Links: Trail Development Strategies,
Creating Trail Connections in the Circuit Trail
Region*, 2019, Tri-State Transportation Campaign

*Pathways for the Garden State: A Local
Government Guide to Planning Walkable,
Bikeable Communities*, 2004, Association of NJ
Environmental Commissions

Seven Good Reasons to Develop Greenways

1 Boost Economic Vitality through increased property values, tourism, and job creation.

2 Connect People with Places and provide options to travel on foot or wheels to reach community destinations, reducing traffic congestion and air pollution.

3 Offer Close-to-Home Recreation and connect parks to encourage people to get outdoors.

4 Promote Active and Healthy Lifestyles, reduce chronic diseases, including diabetes, heart disease, cancer, and stroke. Reduce stress and improve mental health by providing opportunities to routinely access local destinations like work or school.

5 Inspire Community Pride by preserving and connecting residents to historic places and unique cultural and natural features.

6 Improve Air and Water Quality by connecting fragmented natural areas and introducing new vegetated areas that provide wildlife habitat and contribute to clean air and water. Incorporate green infrastructure on connecting roadways to manage stormwater runoff, preventing polluted runoff from reaching streams and rivers.

7 Reduce Flooding and Flood Damage by locating greenways in floodplains to retain floodwater and prevent flood damage to properties.

Why Develop Greenways?

Given New Jersey's dense development patterns, particularly in the northern portions of the state, residents and policy makers are increasingly looking for ways to alleviate traffic congestion and reduce stress on the available parking supply. This presents an opportunity to incorporate greenways into more communities as an integral part of both local and regional transportation networks. Now is the time to take advantage of the window for greenway development.

MAPPING TOOLS - LAND USE AND CONSERVATION PRIORITIES

NJ MAP is an online set of mapping tools for conservation and land use planning accessible through www.njmap2.com. NJ MAP includes data on:

- Water Quality
- Ecological Priorities
- Agricultural Priorities
- Community Green Space Priorities

Greenways bring community-wide benefits. They belong in New Jersey's town centers, suburbs, and rural areas, as well as urban areas. There are more than a million acres of parks and open space in New Jersey. Connecting these public lands through a network of greenways would bring tremendous benefits to all of New Jersey's communities, large and small.

PROTECTING POTENTIAL GREENWAY CORRIDORS SHOULD BE PART OF ALL COUNTY AND MUNICIPAL PLANNING AND GUIDANCE DOCUMENTS.

Support for greenway development and protection of greenway opportunities should be considered through many different phases of municipal and county planning. These include:

- Master Plans
- Land Use Plans
- Parks, Recreation, and Open Space Plans
- Sustainability Plans
- Municipal Zoning Ordinances
- Official Maps
- Transportation and Circulation Plans
- Heritage Plans
- School Access Plans

and subdivision and site plan review are tools for supporting greenway development and protecting greenway opportunities.

Walking and bicycling are important to New Jersey because they...



... are healthy.



... contribute to the economy.



... promote equity.



... are good for the environment.



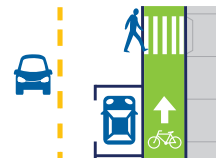
... improve access to schools.



... improve access to public transit.



... help enhance transportation systems to better serve disabled persons.



... are at the heart of Green, Smart, and Complete Streets.



... are fiscally attainable.



... are good for personal finances.



... are growing in acceptance, legitimacy, and preference.



... contribute to placemaking and quality of life in New Jersey.

Source: New Jersey Bicycle & Pedestrian Master Plan, 2012

The Economic Benefits of Greenways

Below are sources of information on the economic benefits that greenways bring to local communities and to the national economy. Across the nation, economic impact surveys and studies for greenways with trails document the amount of money generated and leveraged in greenway communities and make the case that greenways provide a great return on investment.

Rails-to-Trails Conservancy

Investing in Trails, Cost-Effective Improvements for Everyone

This Fact Sheet gives an overview of the economic value of greenways.

Ohio & Erie Canal Towpath Trail – Trail User Spending Impact Study (2018)

This study estimates that trail-user spending is \$6.9 million annually.

Rural Trails Survey Data, 20 Rails-to-Trails Conservancy Pennsylvania and New Jersey Surveys: 2006-2016

The results show \$273 in annual spending on bikes, shoes, clothes, etc. and \$16.30 per outing on food, beverages, etc.).

Trail Towns Program, The Progress Fund

Economic Impact of Regional Trails (2016)

Results of surveys conducted for three trails in Pennsylvania show the overall annual economic benefits for: Great Allegheny Passage, \$50 million; Erie to Pittsburgh Trail, \$7.48 million; and the Ghost Town Trail, \$1.7 million.

Pennsylvania Land Trust Association, Conservation tools.org

Economic Benefits of Trails

Identifies major studies, summarizes key findings of each, and provides hyperlinks to studies.

Alan M. Voorhees Transportation Center, Rutgers University

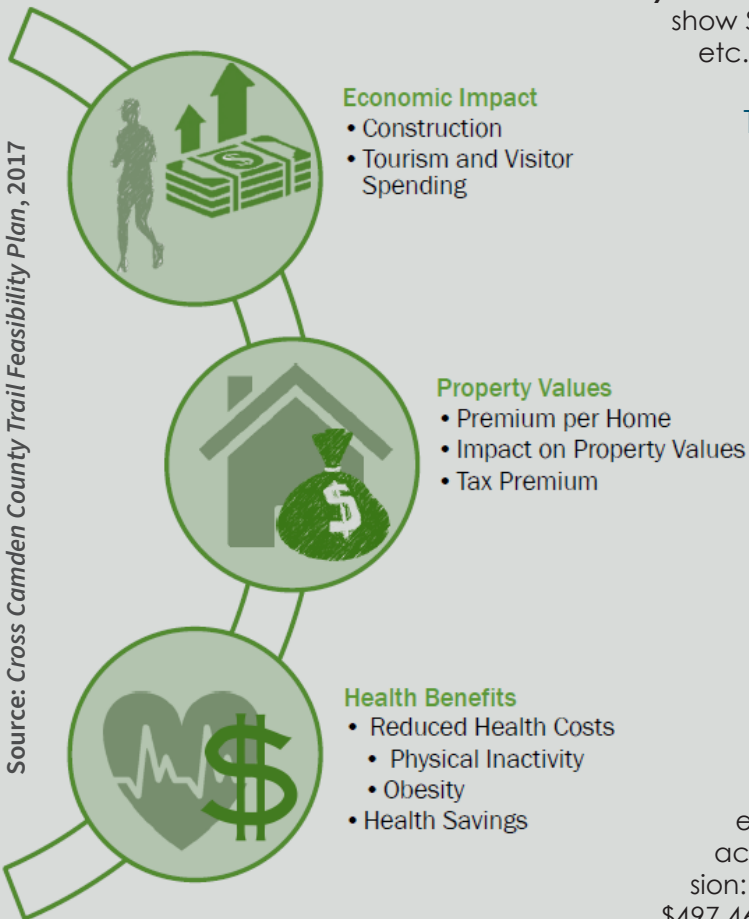
The Economic Impacts of Active Transportation in New Jersey, 2013

Research and analysis of active transportation-related capital investments, businesses, and events over one year estimates the economic activity generated and jobs supported. Conclusion: Active transportation contributed an estimated \$497.46 million to the New Jersey economy in 2011.

East Coast Greenway Alliance

Investing in Our Future: Quantifying the Impact of Completing the East Coast Greenway in the Delaware River Watershed

The East Coast Greenway is a walking and biking route envisioned to stretch 3,000 miles from Maine to Florida, connecting 450 communities. The report's key finding: the value of completing the East Coast Greenway in the Greater Philadelphia Region would represent \$3 billion in public health, environmental, and economic benefits.



Finding the Green in Greenways

It is easy to understand the “green” in greenways through natural areas, or along streams, rivers, and coastlines. These ecological greenways help to protect the essential functions of natural ecosystems. Greenways link together fragmented wildlife habitat and protect plant and animal species. Large areas of trees and plants clean the air and act as buffers that improve water quality in streams and rivers, prevent soil erosion, and filter pollution. They also connect people with nature, which fosters appreciation and stewardship.

“If you think conserving green space is expensive, just imagine the future costs for clean air, clean water, and healthy natural systems if we don’t invest in green infrastructure today.”

Ed MacMahon,
Conservation Fund

Greenways through more developed areas can also bring environmental benefits. Greenway corridors can include vegetated buffers that provide habitat and contribute to clean air and water. In addition to improved aesthetics, planting trees and shrubs adjacent to shared use paths has the added benefits of separating the greenway from neighboring properties and creating a pleasant and shady environment for walkers and bicyclists.

Regardless of the context, greenways should be sited and designed to complement and restore nature and natural systems. Frederick Law Olmsted, the nineteenth century landscape architect of Central Park and many other iconic American parks, is famous for siting greenways in parks as vantage points for viewing and appreciating nature.



Skillman Park, Montgomery Township, NJ

Designing with nature means considering the environment when siting and designing greenways. For example, greenways located in flood-prone areas can absorb floodwaters and help prevent or limit property damage.



Former NJ Pulverizing Tract located in Berkeley Township

Ocean County is in the early stages of developing a comprehensive public access and natural resources management plan, which may include a 1.6-mile section of the Barnegat Branch Trail, connecting Barnegat Township to NJ TRANSIT's Toms River Bus Depot.



Berry Lane Park, Jersey City

Berry Lane Park is a 17.5-acre park constructed on a former brownfield site in Jersey City, NJ. It is part of the historic Morris Canal Greenway, envisioned to extend from Jersey City to Phillipsburg, following the alignment of the historic Morris Canal across northern New Jersey.

When proposing and planning trails in environmentally sensitive areas it is important to coordinate with agencies such as the New Jersey Department of Environmental Protection (NJDEP), the New Jersey Department of Transportation (NJDOT), and the U.S. Fish & Wildlife Service to ensure that potential environmental concerns are addressed.

Greenways, Conservation, and Restoration

Think “beyond the edges” when planning a greenway. You may find unexpected conservation and restoration opportunities. Land adjacent to a greenway may have potential for preservation or restoration as a natural area, park, or farmland. Acquiring adjacent properties for conservation or restoration can improve a greenway’s ecological value, serve as a buffer from development, and improve user experience. Suburban and even urban areas may present opportunities for acquiring adjacent land during greenway development.

Greenways can be incorporated into brownfield restoration. A brownfield is a former industrial or commercial site with environmental contamination that impedes future use. Brownfields in highly developed areas may be among the last remaining undeveloped and large properties that can accommodate greenways. Greenways can be a part of the restoration strategies to improve the environment of former industrial properties such as gravel mines.



Stormwater Planter, Millburn, NJ

Greenways and Green Infrastructure

All greenways can be designed to benefit the environment – even on-road connectors. These can become Green Streets by incorporating green infrastructure to manage stormwater by infiltrating it in the ground using vegetation or porous surfaces, or by capturing it for later reuse. Green Streets protect water quality and minimize street flooding. The trees and vegetation incorporated into Green Street design also provide additional benefits such as an improved environment for walking and bicycling.



Rain Garden, Watershed Institute, Pennington, NJ

GREEN STREETS RESOURCE

[Mainstreaming Green Infrastructure](#) is a program of New Jersey Future that includes resources such as:

- Green Infrastructure Municipal Toolkit
- Developers' Green Infrastructure Guide
- Green Streets
- Green Infrastructure Case Studies
- Green Infrastructure Resources

New Jersey's Growing Greenway Networks

New Jersey is actively working to create greenway networks that connect multiple municipalities and counties, some extending across the state and beyond. Some are well-established, while others are partially complete or in the planning stage. Like the examples below, these multi-jurisdictional greenways are the result of partnerships formed to link local, county, and regional greenways. Statewide and multi-state greenway routes follow and tie together many shorter greenways. Here are just a few examples of both proposed and developing networks shown on the following map.

1 Morris Canal Greenway Corridor

The Morris Canal Greenway Corridor Study identifies a continuous 111-mile route for development of a world-class greenway, including pedestrian and bicycle facilities, along or close to the route of the historic Morris Canal. The greenway route makes connections between all the remaining segments of the original canal towpath and a myriad of community destinations along the way.

The Study was funded by the North Jersey Transportation Planning Authority with participation from the Morris Canal Working Group, with over 100 members representing municipalities, counties, regional organizations, and many more advocates and supporters. The Canal Society of New Jersey had been promoting the concept of the Morris Canal Greenway for decades and continues to work in partnership with local government and nonprofit organizations to facilitate its development.

2 Middlesex Greenway

This is a picturesque open space resource within the communities of Metuchen, Edison, and Woodbridge. Situated on a historic portion of Lehigh Valley rail corridor, this 3.5-mile, 42-acre corridor was purchased by the County of Middlesex in 2002 as a rails-to-trails project for recreational use. The Middlesex Greenway provides a 10-foot wide, paved trail suitable for walking, bicycling, and jogging. Several fully accessible entrances provide access, connecting a diverse array of neighborhoods to area parks, schools, and shopping. A portion of the Middlesex Greenway is part of the East Coast Greenway.

3 The Circuit Trails

Greater Philadelphia's multiuse trail network connects people to jobs, communities, parks, and waterways. Governments, nonprofits, and foundations have collaborated to complete over 300 miles of the envisioned 750-mile regional network in Pennsylvania and New Jersey.

4 The September 11th National Memorial Trail

A memorial trail that will link the planned and existing memorial sites at the World Trade Center, Pentagon, and the Flight 93 National Memorial that follows many greenway routes.

5 Capital to Coast

A 55-mile cross-state multiuse trail that is designed to span New Jersey (east/west) from the Delaware River in Trenton to the beachfront town of Manasquan on the Atlantic Ocean.

6 Delaware & Raritan Canal

A 77-mile multiuse recreational trail built on the footprint of the former Delaware & Raritan Canal Historic Towpath. The trail traverses three counties (Hunterdon, Mercer, and Middlesex) and connects numerous towns along the banks of the Delaware River.

7 Delaware River Heritage Trail

A planned 60-mile loop connecting 24 communities that highlights the many cultural and natural resources along the upper portion of the scenic Delaware River estuary.

“Creating a Regional Trail Network is a bold, new strategy that will have a lasting impact on the region’s environmental and economic future.”

- Robert Freudenberg,
Vice President,
Energy & Environment,
Regional Plan Association

Growing Greenway Networks

New York

NEW JERSEY

Tri-State Trail Network

The Regional Plan Association (RPA) proposes the development of an integrated regional network of nearly 1,650 miles of bicycling, hiking, and walking trails connecting people and open spaces in the metropolitan region of New York, New Jersey, and Connecticut. The plan calls for five trail systems in New Jersey totaling nearly 420 miles

North Jersey Urban Trails Network

The NJ Bike & Walk Coalition is leading a collaborative project to develop a network of greenways across Northern New Jersey that will include links such as the Essex Hudson Connector, the enhanced George Washington Bridge pathways, the September 11th National Memorial Trail, the Morris Canal Greenway, and the potential Northern Valley Greenway.

Newark

Pennsylvania

8 East Coast Greenway

The East Coast Greenway (ECG) extends from Florida to Maine, connecting 15 states, 450 cities and towns, and 3,000 miles of people-powered trails from Maine to Florida – the country's longest bicycling and walking route. Nearly 100 miles of the Greenway pass through New Jersey from Trenton to Jersey City.

New Jersey

Networks grow from greenway connections

9 Cross Camden County Trails

A multiuse bicycle and pedestrian trail that begins at the Delaware River waterfront and extends to the southeastern county line. As the spine of a regional network, it is envisioned to be a recreational greenway proposed in the open space plan and connected through a network of on- and off-road bicycle facilities that connect residents to schools, train stations, shopping destinations, employment centers, and to a regional trails network.

Philadelphia

Delaware

10 Atlantic and Cape May County Trails, South Jersey Multi-County Network

A walking and bicycling trail network through Camden, Atlantic, and Cape May Counties connecting towns, parks, and tourism destinations through a partnership supported by the South Jersey Transportation Organization (SJTPO), the Rails-to-Trails Conservancy, Northeast Region, and other advocates.

Map Assistance:
Rails-to-Trails Conservancy, Northeast Region

Vision

Does it hold up?



2. Getting Organized and Building Support

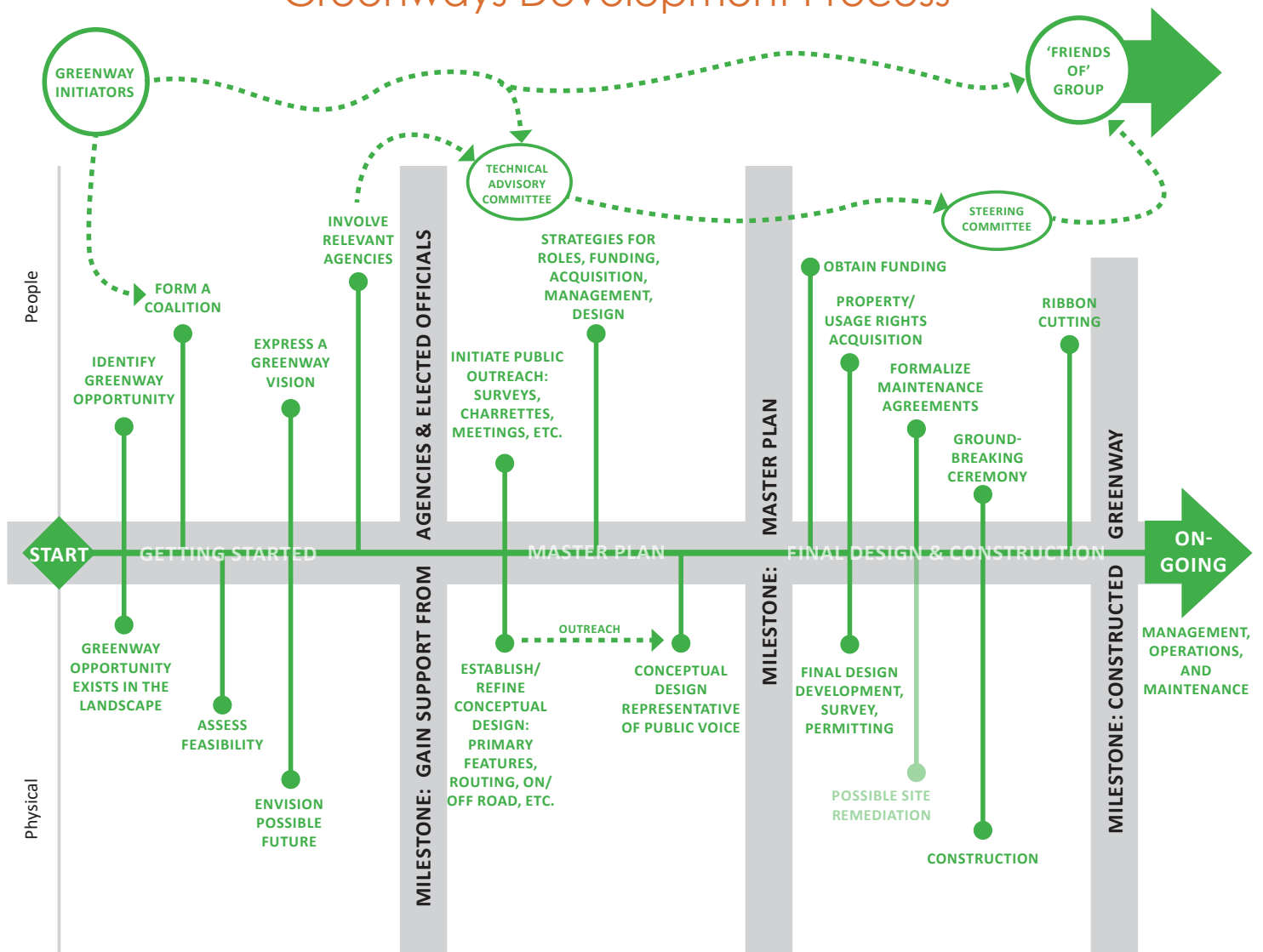
It is important to understand the greenway planning process and the organizations and resources that help with greenway planning. Sound planning is the foundation for future phases of concept development, design, and construction.

Planning builds the framework of support from government, community organizations, and the public. This framework of support must be in place to generate and maintain momentum. Strong support will help overcome unexpected obstacles and be a source for ideas and creative solutions along the way.

Because greenways are developed to benefit communities, engaging local residents early and often is essential. Understanding community demographics is the first step in crafting inclusive outreach strategies that reach the diverse populations within jurisdictions. Good planning and outreach ensure that all groups have a voice that is heard and opportunities for meaningful participation. Taking the time to gather public input effectively from the start will save time and effort throughout the planning and development process.

The steps for building support are largely consistent regardless of the greenway type, location, and whether the initiative is launched by government, nonprofit, or grassroots organizations. Becoming familiar with organizations that are typically involved, mobilizing a task force or advisory committee, and taking action to gain government and community support are key elements. Everyone who stands to benefit from a greenway in the long run should be invited to learn about and give input into the planning and design of the greenway.

Greenways Development Process



Who is Involved in Greenway Planning?

Partnerships are at the core of every greenway project. Greenways typically begin with one or more champions from the public or within government who promote the concept to community leaders and government decision-makers. They plant the seeds for grassroots support and the formation of friends and advocacy groups. These informal and temporary collaborations sometimes grow into formal non-profit organizations with ongoing involvement throughout the development process and beyond.

Greenway advocates need the cooperation of local governments, which regulate land use and development and manage public investment. Local and county governments need community support to advance projects in the public interest. Greenway champions and grassroots organizations help build community support. Grassroots organizations need local and county governments to take the lead on critical technical tasks that are beyond the capacity of volunteers and grassroots organizations to perform.

Getting Local and County Government Support

Local and county governments are a first stop for grassroots and nonprofit organizations. Elected officials, key departments, and advisory committees should be informed and consulted to discuss

greenway concepts and initiatives. They can help assess feasibility and provide insights into relevant programs, projects, priorities, and funding sources:

- **Elected Officials:** Mayors and Councils, County Freeholders
- **Departments:** Planning, Engineering, Parks and Recreation, Health
- **Committees:** Environmental Commissions and Green Teams, Transportation and Recreation Advisory Committees, Youth-oriented Committees



Other departments and committees could play a significant role in later stages of greenway development. Examples are public works departments, tourism boards, and historical commissions.

Talk to neighboring municipalities and counties when greenways cross municipal and county boundaries. Knowing what is happening on the other side of jurisdictional boundaries may reveal new opportunities for greenway extensions and expanded networks.

Once the greenway concept gains traction at the local and county government level, outreach to state and federal legislators becomes important. They can become enthusiastic

supporters and greenway promoters, opening doors to community leaders, organizations, and government agencies.

Municipal and County Guidance Planning Tools

Becoming familiar with municipal and county master plans and priorities is also important as you are developing your greenway message. All municipalities and counties have plans and guidance documents that outline vision, goals, objectives, and priorities for policy development. Master plans cover topics that include land use, transportation, parks, recreation, and open space preservation – all relevant to greenways development. Understanding how the greenway “fits” into the current municipal and county plans will prepare you to present the greenway concept to government representatives more effectively.

Another strategy that municipalities can use is to negotiate rights-of-way as their planning boards review development projects. This has the potential to substantially reduce greenway acquisition costs.

When Greenways Cross Jurisdictions

Development of multi-jurisdictional greenways requires coordination and ongoing communication among all municipal and county organizations along the proposed alignment. Convening representatives at periodic meetings is critical to ensure that plans are complementary and to collaborate on greenway development strategies. This requires a lead organization and the formation of a multi-jurisdictional working group that can serve as a forum for discussion, collaboration, and problem-solving.

Even without the participation of all jurisdictions along a proposed alignment, a greenway can be developed in phases. Leadership and staff change over time, and so do official outlooks and positions on issues - especially when there are neighboring municipalities and counties with successful greenways!

CONTACT MUNICIPAL AND COUNTY PLANNING AND ENGINEERING DEPARTMENTS EARLY TO DISCUSS GREENWAY CONCEPTS.

Partnership Advantages

Pooling money from government sources and private sources increases the money available for greenway projects while meeting the public/private funding match requirements of some grant programs. Demonstrating government, nonprofit, and community support strengthens all funding and grant applications.

- **Volunteer and nonprofit organizations can:**

- Conduct funding campaigns to raise money for greenway amenities, such as benches and kiosks, tree and shrub plantings, interpretive exhibits, and art installations.
- Conduct targeted and effective community outreach campaigns that local and county governments cannot do because they lack staff, staff time, or funding.
- Advocate and promote greenways to gain the support of legislators, which government agencies are constrained from doing.

- **Local and county governments can:**

- Provide technical assistance and support, for example, engineering and planning guidance, mapping, and coordination with utilities and railroad companies.
- Provide grant administration and implementation support that are beyond the capacity of volunteers or small nonprofit organizations.
- Incorporate greenways into master plans, guidance documents, and projects. Municipal governments can also pass ordinances, official maps, and use other tools to protect greenway opportunities and facilitate development over time.
- Engage volunteer and nonprofit organizations to assist with maintenance and programming tasks.

Agencies and Organizations Can Help

Information on every aspect of greenway development is available from a myriad of national, state, and regional government, and nonprofit organizations. There are libraries of information pertinent to greenway development on every topic - bicycle and pedestrian transportation, recreation, land conservation, green infrastructure, public outreach, social equity, and health, to name just a few. Many organizations manage support and funding programs that provide direct assistance to government and nonprofit organizations.

The New Jersey Department of Transportation and the New Jersey Department of Environmental Protection are key state agencies that can provide technical assistance and funding. Because their assistance is likely to be critical during future phases of greenway development, they should be made aware of initiatives early in the planning process.

NEW JERSEY DEPARTMENT OF TRANSPORTATION (NJDOT)

NJDOT is an important partner for both funding and technical assistance for projects that improve pedestrian and bicyclist safety. The Department's Office of Bicycle and Pedestrian Programs has provided many New Jersey municipalities and counties with technical support to develop bicycle and pedestrian plans and programs tailored to their specific needs and network opportunities. Furthermore, the Division of Local Aid provides funding to local projects that incorporate greenways.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NJDEP)

NJDEP manages the Green Acres and the Recreational Trails Programs, both important sources of technical assistance and funding for local and nonprofit land acquisition, park development, farmland preservation, and stewardship activities. NJDEP works with NJDOT on open space and recreation projects, and is also responsible for administering regulations related to environmental and historic preservation.

Developing successful greenways requires many types of support. The following list of agencies and organizations may be useful for both on-road and off-road greenways at different phases of development. They provide information, offer technical assistance, and many manage grant programs.

Some agencies and organizations listed may address topics not typically associated with greenways. Green infrastructure, land conservation and restoration, and arts and cultural elements can be incorporated into design; guidance from Transportation Management Associations and the New Jersey Bike & Walk Coalition may bring new ideas. Explore the organizations' websites. You may be surprised!

Selected Supporting Organizations

NATIONAL ORGANIZATIONS

- **American Trails** – Provides comprehensive online information addressing planning, building, designing, funding, managing, enhancing, and supporting trails, greenways, and blueways. Also provides training programs, conferences, and events.
- **National Complete Streets Coalition, Smart Growth America** – Offers information, guidance, and technical information on policy and Complete Streets implementation, with a focus on municipalities, counties, and state agencies.
- **Rails-to-Trails Conservancy (RTC)** – Dedicated to creating a nationwide network of trails and connecting corridors, and offers an online resource library, technical assistance, and support.
- **East Coast Greenway Alliance (ECGA)** – Leads the development of a 3,000-mile walking and bicycling route from Maine to Florida that also crosses New Jersey. ECGA works with volunteers, partner organizations, and officials at the local, state, regional, and national levels to assist in trail development and transition more of the route onto protected paths.

NEW JERSEY STATE AGENCIES AND COMMISSIONS

- **New Jersey Department of Transportation (NJDOT)** – Provides guidance, technical assistance, and funding programs to municipalities and counties for bicycle and pedestrian plans, projects, and policies. Municipal Aid, County Aid, Bikeway Grant Program, Safe Routes to School, Safe Routes to Transit, and Transportation Alternatives Set-Asides are among the available funding programs.
- **New Jersey Department of Environmental Protection (NJDEP)** – Manages the Green Acres and Recreational Trails Programs. Provides technical assistance and funding for local and nonprofit land acquisition, park development, or stewardship activities.
- **New Jersey State Council on the Arts** – Creates and sustains public values intrinsic to the lives of people and instrumental to the advancement of NJ communities.
- **New Jersey Highlands Council** – An independent state agency that oversees regional planning in the designated Highlands Region as a means to protect the important natural resources. The Highlands Region includes portions of Sussex, Warren, Morris, Passaic, Bergen, Hunterdon, and Somerset counties.
- **New Jersey Pinelands Commission** – An independent state agency whose mission is to preserve, protect, and enhance the natural and cultural resources of the Pinelands National Reserve, which includes Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Ocean counties.

OTHER NEW JERSEY ORGANIZATIONS

- **Creative Placemaking at New Jersey Institute of Technology (NJIT)** – Offers knowledge and training to purposefully engage others to better integrate the arts and culture into community, social, and economic development planning and practice.

- **New Jersey Association of Environmental Commissions (ANJEC)** – Provides education and support for environmental commissions and other local boards and public officials; extensive online resources, technical assistance, courses, and workshops.
- **New Jersey Bicycle & Pedestrian Resource Center (BPRC)** – Assists public officials, transportation and health professionals, and the public in creating a safer and more accessible walking and bicycling environment. Offers programs, an extensive online resource library, technical assistance, and grant programs.
- **New Jersey Bike & Walk Coalition (NJBWC)** – Statewide advocacy organization for bicyclists and pedestrians. Offers information, education, events, and technical assistance.
- **New Jersey Conservation Foundation** – Offers programs, technical assistance, and project support to preserve and restore lands, focusing on project areas and greenways with high conservation value.
- **New Jersey Future** – Manages “*Mainstreaming Green Infrastructure*,” a program focusing on municipalities and developers.
- **Metropolitan Planning Organizations (MPOs)** – Federally mandated and funded regional transportation planning organizations; three MPOs in New Jersey: North Jersey Transportation Planning Authority (NJTPA), Delaware Valley Regional Planning Commission (DVRPC); South Jersey Transportation Planning Organization (SJTPO). Provide information, technical assistance, and funding programs.
- **New Jersey Safe Routes to School Resource Center (NJSRTS)** – Statewide initiative to enable students to safely walk and bicycle to school. Provides technical assistance, a grant program, and extensive resources on policy and design.
- **New Jersey Transportation Management Associations (TMAs)** – Eight regional organizations that work with businesses, commuters, county and local governments, MPOs, and state agencies to implement programs that reduce traffic congestion and improve walking and bicycling environments. See the TMA Council of New Jersey website to find the TMA active in your area. TMAs provide information, technical support, training, and workshops.

Forming a Task Force or Advisory Committee

A task force or advisory committee is a platform for community collaboration and involvement in the greenway development process. A task force is made up of volunteers interested in advancing and promoting a greenway idea. One or more community advocates or organizations typically convene a task force with the goal of building public and government support. A task force focuses on strategies to move from greenway vision to implementation.

Advisory committees are typically convened by governments to solicit community input and assistance. They are convened early in the planning process to ensure that greenway development addresses the community’s vision, needs, and concerns. Community involvement is not only an effective strategy but a requirement when state or federal funding is involved. These funding sources typically provide substantial funding for large expenditures such as land acquisition and construction.

Who Should Be Included?

Whether convened by community members or government, membership should be diverse and include a cross section of the community. Consider representation from organizations that would benefit from the greenway such as schools, senior centers, bicycle shops, businesses, and bicycling and walking groups, as well as professionals such as lawyers, accountants, real estate agents, planners, and designers who may be able to lend unique knowledge and insight.

Membership will vary depending on the greenway characteristics and features, what destinations it will connect, and the types of anticipated users. The committee should include at least one resident and business owner that lives or operates close to the greenway alignment.

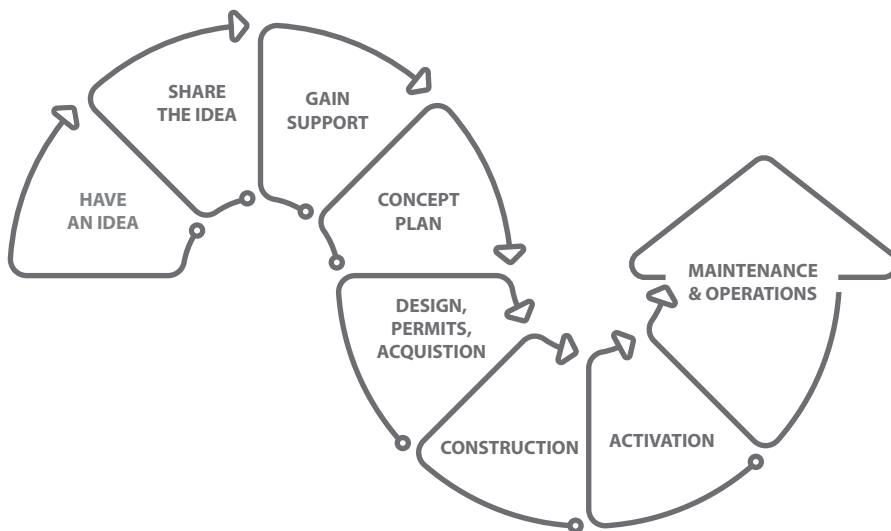
Roles and Activities

Task force and advisory committee roles are to engage the community, cultivate partners and support, and facilitate greenway development. The first item of business is to confirm the purpose, objectives, activities, meeting schedules, and member expectations. These are often documented in task force or advisory committee charters.

Task forces are typically ongoing and their roles and activities will evolve and change. They should be inclusive and flexible. Volunteers have limited time and their availability will vary. It is important to make sure that everyone has a useful role that fits their interests and time commitments.

Advisory committees are typically temporary, active within a specific time frame during a stage of development. Members should commit to participation for a set duration to ensure they follow the development process to the conclusion.

Greenways Development Process



Building Community Support

Building public and government support is a primary function of a task force. Effective outreach to the public and to government representatives begins with a plan.

TASK FORCE OR ADVISORY COMMITTEE MEMBERSHIP CATEGORIES TO CONSIDER

- Walking and Bicycling Groups
- Bicycle Shops
- Businesses/ Chamber of Commerce, “Main Street”
- Schools and Educators
- Seniors
- Youth Organizations, Scouts
- People with Disabilities
- Neighborhood Groups
- Community Attractions and Destinations
- Health and Wellness
- Recreation and Parks
- Historical Societies
- Tourism

GOVERNMENT REPRESENTATION

- Municipal/County Planners
- Transportation Committees
- Environmental Committees, Green Teams
- Economic Development Authorities and Committees
- Transit Agencies
- Potential funders (government agencies, foundations, etc.)

TYPICAL TASK FORCE ACTIVITIES

- Community meetings, presentations, events
- Publicity campaigns
- Branding and marketing
- Websites and promotional material
- Fundraising and grant writing
- Coordination with government and supporting organizations

Preparing a Community Participation Plan

Public participation is the process by which interested and affected individuals, organizations, agencies, and government entities are consulted and included in the decision-making process. To make a plan, you must have a good sense of who makes up the community, whose support you are seeking, and their interests and concerns. Community participation is a two-way street. It is not just telling people about the greenway; it is also about listening to their ideas and concerns. In the end, both you and members of the community will have a better understanding of the greenway concept. A public engagement plan should address these questions:

- Who are the audiences to engage?
- Where do they live?
- What kinds of public engagement strategies would be effective?
- What is the timeframe for public engagement?
- What resources are available for public participation activities (e.g. funding, volunteer help, etc.)?

PUBLIC PARTICIPATION PRINCIPLES

- Use a variety of strategies
- Tailor the approach to the audience
- Go to where the people are
- Piggyback on community events
- Make it interactive and fun
- Ask questions
- Offer ways that people can get involved
- Give feedback - let them know what you heard

Keep an open mind throughout all public engagement activities. Concerns may be raised that are much larger than greenway alignment and design, but are relevant and important to the neighborhoods that will be impacted. For example, representatives of low-income communities may bring up crime, illegal dumping, lack of lighting, and gentrification that may be exacerbated by the new trail. When this happens, make sure to use active listening, develop accurate answers, and avoid dismissing concerns as “outside the mission” or “not my job.” Discovering, recognizing, and, as much as possible, addressing impacts are the responsibilities of everyone involved in greenway development.

Good community participation should be followed by responsive action. Think about what resources or contacts you can share to potentially help alleviate the problem. This will build trust and show that you care about what the community is actually going through in real time. For example, if there is concern that the trail might exacerbate gentrification, think about the ways to support the community to address this concern. Can you contact an affordable housing group in the area and discuss the economic boost that a trail might provide, so that they can be prepared to help with preserving or creating affordable housing?



Community Asset Mapping

Grassroots groups can use community asset mapping to help in developing a community participation plan. Asset mapping provides information about the strengths and resources of a community. Once community strengths and resources are inventoried and depicted in a map, you can more easily think about how to build on these assets to build support, generate ideas, identify issues, and find solutions.

Community assets include places that can be marked on a map and potentially accessed by a greenway, such as schools, hospitals, churches, and downtowns. Community assets also include organizations, people, partnerships, funding, and policies. These should also be discussed and documented. Task forces that represent a broad range of groups and populations are more likely to identify assets that are not apparent to everyone.



Public Participation Strategies

There are many techniques to build support for the greenway. Holding public meetings is a traditional approach. Public meetings can be effective, but are unlikely to attract a broad and representative audience. Be creative in thinking about how to reach the audiences you have identified. Visual representations are especially important in reaching all audiences. Use both web-based and in-person approaches to attract people with different abilities and preferences.

Most of all, provide lots of ways for people to participate.

EXAMPLES OF PUBLIC PARTICIPATION STRATEGIES

- Neighborhood meetings (churches, community centers, senior centers, etc.)
- Community group presentations
- Charrettes (hands-on visioning and planning workshops)
- Exhibits at community events
- Walking tours
- Walkability and bikability audits
- Websites and social media
- Newspaper articles/editorials, radio, TV interviews, billboards, flyers, etc.
- Interviews and focus groups
- Community surveys
- Photo contest

Photo: Julia Raskin, NJ Conservation Foundation



Camden Streets Community Social, hosted by Bike Camden County, Tri-State Transportation Campaign and the NJ Conservation Foundation

ENGAGE! A Public Involvement Resource

The North Jersey Transportation Planning Authority's Public Involvement Toolkit presents a comprehensive array of public engagement strategies tailored to different audiences, contexts, and budgets. The online toolkit includes:

- Database of tools and techniques
- Tips for planning and executing
- Resources and examples from leading practitioners

Inclusionary Planning

All community groups should have meaningful involvement in public policy and decision-making. Certain populations, such as low-income and people of color, have historically been underrepresented in planning processes. Once you have identified who they are, you can tailor your approach to remove obstacles to participation.

Barriers may include language, access to transportation, or the need for special services.

EXAMPLES OF BARRIERS TO PARTICIPATION

- Limited English proficiency: need for translated or assisted conversations
- Limited or no web access: need for distribution of printed invitations, materials, and face-to-face meetings
- Lack of transportation: need for walkable or transit-accessible meeting locations
- Lack of child care: need for babysitting services

Accommodations may simply require holding a number of meetings in neighborhoods and at community gathering places, such as churches or schools, or in conjunction with community events that are already planned.

Consider reaching out to community-based institutions that work with underrepresented and disenfranchised groups to better understand how to reach these populations. There may be community groups willing to help with translations or youth organizations that can provide babysitting or other support services.

Engaging the Health Community

More and more, public health agencies and service providers see the value of greenways to public health. Greenways can provide close-to-home opportunities and support more active lifestyles. Outreach to hospitals and health care providers can generate support and lead to partnerships and health-related greenway programs later on.



Middlesex Greenway Health Impact Assessment Event

Photo: New Jersey Safe Routes to School Resource Center

HEALTH IMPACT ASSESSMENT (HIA) PLANS AND HEALTH-RELATED PUBLIC ENGAGEMENT PROGRAMS

Source – New Jersey Health Impact Collaborative, Bloustein School of Planning and Public Policy, Rutgers University

- *Middlesex Greenway Access Plan Health Impact Assessment*, 2014
- *New Brunswick Municipal Public Access Plan: Desktop Health Impact Assessment*, 2017

Online database:

- HIAs and Other Resources to Advance Health-Informed Decisions, Search “trails,” Pew Toolkit and searchable database, Pew Health Impact Project

Programs:

- Walk with a Doc – national program supporting local community events
- Park RX – national organization supporting local communities and healthcare professionals to “make it easy” to prescribe visits to parks and other protected areas to their patients

Finding the Money and Looking Ahead

Building public, government, and private support for a greenway project is a prerequisite for finding the money to develop it. Both public and private funding will likely be necessary. Competition for funding is intense. Greenways that can demonstrate extensive support as well as broad social benefit have the greatest chances of success. Other factors that improve the odds:

- Local government and public investment – funders often require local “matching funds”
- Multi-jurisdictional greenways – have a broader impact and regional support

The scope of greenway development is broad, encompassing planning, land acquisition, design and construction of bicycling and walking facilities, wayfinding and signing, and operations and maintenance. Land restoration, historic preservation, arts, education, and interpretive programs are just a few of the components that may be part of the greenway plan. Greenway projects that cross municipal, county, or state jurisdictions are even more diverse and coordination among partners is critical.

In addition, different development phases – planning, acquisition, design and engineering, and construction – are typically funded from a number of sources over time.

The cost of greenway development varies as widely as the greenway vision. Costs depend on many factors, from type, length, complexity, and location to the needs of each phase of development. There is no one formula for calculating costs - and no one funding source that will cover all the phases and components. Don't expect any one source to pay for everything!

Always check these elements when considering applying for grants:

- What they will fund
- Who is eligible to apply (local government and/or nonprofit organizations)
- Maximum and minimum funding

All grants are competitive! Check previous awards as well as the number of applicants. Some funding sources receive fewer applications than others, which increases the likelihood of success.

Think outside the box when looking for funding. Often funding sources that might be dedicated for other purposes such as stormwater management or open space preservation can be used to provide funding for a greenway project if there are overlapping goals.

WHEN PLANNING FUNDING STRATEGIES AND SOURCES:

- Make sure municipal and county planning and engineering directors (or others responsible for these functions) are aware of the project. They can help to identify potential funding sources. Coordination is also important to ensure that you are not in competition with municipal applications. Funders will expect evidence of local and county government support and coordination.
- Municipalities and counties may be able to take on design and engineering in-house, which can be a cost savings and serve as matching funds that are required by some sources.
- Consider sources of technical assistance - not just funding. There are both government and nonprofit organizations that offer technical assistance. The National Park Service's Rivers, Trails, and Conservation Assistance Program, NJDOT's Local Technical Assistance Program, Rails-to-Trails Conservancy, and the Trust for Public Land are examples of sources for technical assistance.

WHEN APPLYING FOR GRANTS:

- You will need letters of support from government and nonprofit organizations directly or indirectly involved in greenway development. Funding agencies look for evidence of strong municipal and county resolutions of support and letters from elected officials.
- Dot the i's and cross the t's when applying for any grants! Following all instructions precisely is important. If there are questions, contact the funding source. Grant applications that are missing information are less likely to be funded.
- Be brief, succinct, and craft responses that address the interests and concerns expressed in the grant solicitation.
- Show that you have thought ahead through all the phases of development. All funders are interested in funding projects that will be successful and will be reluctant (or unwilling) to award funds when key elements have not been established, for example:
 - Who currently owns the property?
 - Who will own the property?
 - Who will manage and maintain the facility?

GOVERNMENT FUNDING

- Minimums for federal funding may be large, for example, \$300,000 or even more than \$1,000,000.
- Funding from state and federal government sources are typically available to municipal and county governments only and require extensive administrative oversight. Nonprofit and friends groups often partner with local governments, which have the capacity to write grants and to administer and manage greenway projects.
- Don't forget about line item funding from municipal and county budgets. Many municipalities and counties have open space bonds or trusts that may be used for phases of greenway development.

NONPROFIT AND PRIVATE FUNDING

There are nonprofit organizations that offer grants as well as technical assistance. The Association of New Jersey Environmental Commissions (ANJEC) and Sustainable Jersey are examples. Examples of private funding sources are:

- Private developer contributions
- Foundations (e.g. William Penn Foundation)
- Corporations (e.g. REI, banks)
- Community fundraising events

OTHER SOURCES

- Pay attention to new redevelopment projects in your area. Developers that want to have their projects approved by the local governing body will often include public facilities and open space within their projects that frequently include trails and walkways. Local officials can include impact fees within a redevelopment agreement if the area under development could serve as a useful link in the greenway.
- The New Jersey Transportation Infrastructure Bank provides low interest loans for on-road and off-road facilities.
- Some New Jersey municipal and county governments have open space bond funds that can be used for greenways development.

The following list is a compilation of funding sources that have been, or could be used to fund greenways development projects associated with off-road greenways and on-road connectors. In addition to capital projects, some can fund programmatic activities such as education and promotion. Others offer technical assistance.

The list is not intended to be comprehensive, but will give a sense of the diversity of sources. In addition to those listed, there are other sources that support related conservation and recreation projects, green infrastructure installations, and enhancements such as public art. Funding sources and programs also change over time. Researching opportunities is an ongoing task for grassroots organizations, as well as local and county governments.

Selected Funding Sources for Greenway Development

<i>Funding Source</i>	<i>Types of Projects or Activities</i>			
	Capital Projects (Note #1)		Planning & Design	Programmatic (Note #2)
	<i>On-Road</i>	<i>Off-Road</i>		
Federal				
Congestion Mitigation and Air Quality Improvement (CMAQ) Program				
Transportation Alternatives Set-Aside				
National Park Service - Rivers, Trails, and Conservation Assistance Program				
Safe Routes to School Program (SRTS)				
State/Regional				
NJDOT - County & Municipal Aid				
NJDOT - Bikeway Grant Program				
NJDOT - Safe Streets to Transit				
NJDOT Safe Routes to School				
NJDOT/NJ TRANSIT - Transit Village Initiative (Note #3)				
NJDOT - Local Planning Assistance Program				
NJDEP - Green Acres Program (acquisition)				
NJDEP - Recreational Trails Program				
Metropolitan Planning Organizations (MPOs: NJTPA, DVRPC, SJTPO) - Multiple programs, e.g. NJTPA Subregional Studies, Planning for Emerging Centers Program; DVRPC Regional Trails Program, Transportation and Community Development Initiative)				
Highlands Council - Environmental and Economic Sustainability Grants				
Pinelands Commission - Pinelands Conservation Fund				
Municipal/County				
Municipal/County Budget Line Item Allocations				
Municipal/County Open Space Bonds/Trust Funds				
Nonprofit/Private				
Sustainable Jersey				
Association of New Jersey Environmental Commissions (ANJEC) Grant Program				
Foundations, e.g. William Penn Foundation; companies, e.g. REI, banks				
New Jersey Healthy Communities Network				
Low-Interest Loans				
New Jersey Transportation Infrastructure Bank (Note #4)				

Notes:

1. Capital Projects relate to on- or off-road facility design and construction activities. Project elements associated with on-road typically include: striped bicycle lanes, signage, sidewalks, signals, and protected on-road bicycle lanes, etc. Project elements associated with off-road facilities typically include paved paths, signage, road crossings, bridges, boardwalks, wayside exhibits, etc.

2. Programmatic Activities relate to project elements such as technical assistance, education, enforcement, safety, promotion, and marketing.

3. Transit Village Funds cannot be used for acquisition and the project must be within a 1/2 mile of the transit facility.

4. New Jersey Transportation Infrastructure Bank provides low interest loans for on-road and off-road projects.

Looking Ahead

The simplicity and uniformity of a completed greenway may look as though it was the result of a straightforward development process, but greenways have built-in complexities that can cause unexpected delays and require course changes along the way.

For example, right-of-way acquisition can be challenging. Greenways typically pass through and by many properties and may also cross municipal and county boundaries. Their linear nature complicates property acquisition and typically requires extensive coordination. Negotiating to secure right-of-way can be time-consuming and may lead to the need for an alternative alignment, at least for the short term.

The development process will also vary depending on the type of greenway. For example, greenways on or adjacent to railroads or utility corridors may require complex negotiations and strategies for addressing environmental contamination and maintenance agreements. Greenways adjacent to or crossing wetlands, streams, or rivers will be subject to environmental protection regulations with permitting requirements.

TYPES OF DEVELOPMENT CHALLENGES

- Extensive and complex property acquisitions
- Overcoming landowner, neighbor, and public opposition
- Negotiating and coordinating with railroad and utility companies
- Coordinating with neighboring municipal and county governments
- Complying with regulations and permitting requirements (e.g., zoning; environmental and historic impacts; transportation-related requirements)
- Requiring major infrastructure projects (e.g., bridges, over- and underpasses)
- Securing funding and phasing development

TRAIL-BUILDING TOOLBOX RAILS-TO-TRAILS CONSERVANCY

A comprehensive resource for every phase of trail development, including technical tips and tried-and-true methods for generating neighborhood, political, and funding support. Topics include acquisition strategies, working through opposition with neighbors, negotiating with railroads, working with utility companies, and much more.

Each greenway project follows a unique course based on a myriad of factors. Location, type, community destinations, and the complexity of making connections will shape greenway development. Some greenways will have fewer challenges and can be completed relatively quickly. For example, they may have limited acquisition needs or rights-of-way may already be in public ownership.

Completing greenway networks across jurisdictions is a longer-term initiative that may continue for years. Whether it is a community greenway or a regional network, it will take a team of dedicated greenway champions to succeed.

PERSISTENCE IS REQUIRED!

Regardless of the variations, all greenways follow a typical development process. By anticipating future phases and challenges, planning for solutions can begin early. Anticipating the process from beginning to end will help greenway champions achieve efficiencies and reduce delays along the way.

**EFFECTIVE,
FREQUENT,
AND CONSISTENT
COMMUNICATION
IS KEY!**



East Coast Greenway, Lincoln Park, Jersey City, NJ

3. Greenway Development Process

All ideas start somewhere, and all greenways start as ideas. Ideas for greenways originate in all kinds of ways, yet all greenways require a collaborative process of communication, design, change, refinement, and consensus-building to develop from an idea to a built facility.

This section provides a model greenway development process designed to help greenway initiators understand the steps necessary to advance their potential project. Although all greenways are developed in different ways, the model process provides information on common components, steps, and challenges that will be part of developing a greenway in New Jersey. A vital component of all greenway development is involvement and collaboration with the public.

The model process is divided into four “acts,” or stages that each constitute a distinct, comprehensible component of an overall process. By taking the time to read through this model process, greenway initiators can gain an understanding of the big picture, begin planning their potential greenway, and ultimately save time by operating in a strategic manner.

Act 1: Get Started and Gain Traction

Act 2: Prepare a Concept Plan

Act 3: Design Development, Engineering, and Construction

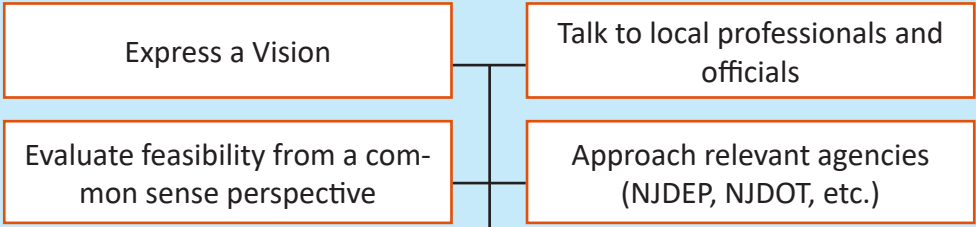
Act 4: Activation, Operations, and Maintenance

Start with an Idea

ACT 1: GET STARTED AND GAIN TRACTION

Public Involvement

- Seek partnerships
- Seek talent
- Take the pulse / be informal

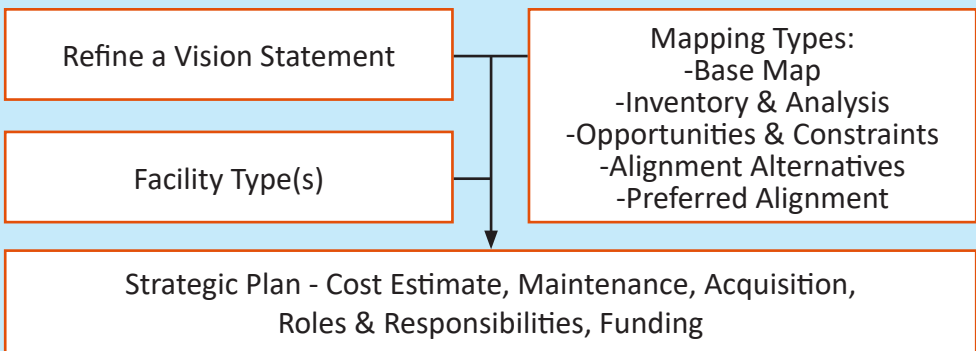


Milestone: Determine that the vision is achievable

ACT 2: PREPARE A CONCEPT PLAN

Public Involvement

- Public Meetings
- Workshops
- Surveys & Questionnaires
- Interviews
- Expression of preference

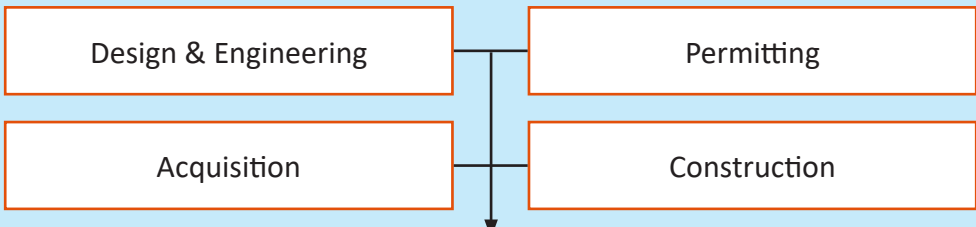


Milestone: Community-supported greenway plan

ACT 3: DESIGN DEVELOPMENT, ENGINEERING, & CONSTRUCTION

Public Involvement

- Groundbreaking Event
- Communication & Progress Updates
- Ribbon Cutting Event

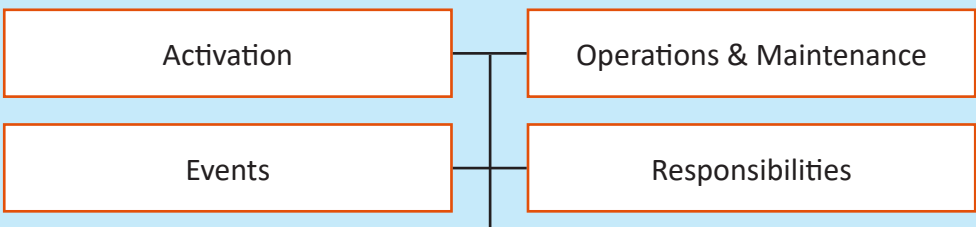


Milestone: Constructed greenway

ACT 4: ACTIVATION, OPERATIONS, & MAINTENANCE

Public Involvement

- Friends-Of-Group
- Events
- Maintenance Activities
- Advocacy & Growth



Ongoing: Maintain a successful greenway

Act 1: Get Started and Gain Traction

Luckily for us all, you have an idea for a greenway! It is going to take a serious amount of determination, coordination, and communication to turn your idea into reality. Act 1 describes how to get the greenway idea out of your head, onto paper, and into conversations.

Start with an Idea

ACT 1: GET STARTED AND GAIN TRACTION

Public Involvement

- Seek partnerships
- Seek talent
- Take the pulse / be informal

Express a Vision

Talk to local professionals and officials

Evaluate feasibility from a common sense perspective

Approach relevant agencies (NJDEP, NJDOT, etc.)

Milestone: Determine that the vision is achievable

Make it Something to Talk About

Let's face it – greenways are complex. Developing a greenway requires clear communication among many people – citizens, land owners, planners, engineers, environmental scientists, government and elected officials at all levels – and getting those people to focus on, understand, and support your idea for a greenway is a challenge.



It is important to make your greenway idea something people can understand quickly and easily. The way you communicate your idea will evolve over time. It will grow in sophistication and polish as you learn and communicate with more people to gain support. As you research greenways, you will discover all types of media – websites, pamphlets, videos, maps, news articles, studies, reports, design plans, presentations, branding, and more.

If you are just getting your greenway idea started, don't be intimidated. Start simply. Work on a map and a written description as a starting point to communicate your greenway idea. These will be resources for discussion with local elected officials, planning, and engineering staff, as well as friends, neighbors, and community groups.

Map

Think about how to draw your greenway idea on a map. A map is an indispensable visual aid to communicate the location and context of the potential greenway. As the greenway initiative progresses and you gain assistance and support from professionals in government and consulting the map will grow in sophistication.

When starting out, it is okay for your map to be rough. In fact, it should be rough because arriving at a final route for the greenway is a big step that involves input from a wide range of people. Keep it simple. Here are some ways to get started:

- Start on paper and draw your greenway with a pencil or marker:
 - Print a road map or an aerial map from your favorite online mapping provider
 - Look at your municipal or county website for maps that show municipal borders, roads, waterways, and parks or open space
 - Visit your local library and ask about atlases and maps from the U.S. Geological Survey
- Start on the computer:
 - Use the My Maps feature in Google Maps or use Google Earth to draw your greenway alignment electronically
 - Check your municipal or county website for the ability to customize maps online
 - Check the New Jersey Department of Environmental Protection and U.S. Geological Survey websites for online mapping tools and data

CAUTIONARY NOTE FOR MAPS

Understand the concerns of property owners and neighbors that could be impacted by your greenway idea. For many greenways, it is necessary to secure access to land through acquisition or easement – processes that require significant time, effort, funding, and negotiation. When mapping your greenway, be sensitive and flexible with affected land owners. Use words like “potential” or “idea for a greenway” to describe your map, and use your map as a tool for collaboration.

MAP RESOURCES

Conservation Blueprint. The Nature Conservancy, New Jersey Conservation Foundation, Rowan University, and other groups teamed up to develop an interactive online map of New Jersey’s conservation priorities.

CHANJ. The New Jersey Division of Fish & Wildlife has an interactive online map of many different environmental considerations through its Connecting Habitat Across New Jersey Program (CHANJ).

Description

In addition to a map, develop a concise description of the potential greenway. This will become a resource both for conversations and for sharing your idea in writing. What is your elevator pitch? What will grab the busy councilperson’s attention? Work to answer questions, such as:

- What will the greenway be called?
- Where will the greenway go? How long will it be?
- What destinations will the greenway connect?
- Who will use the greenway? Is it for recreation, transportation, or both?
- How will the greenway benefit the community?
- What will make the greenway unique and attractive?

Try to enhance your description with visual aids as much as possible. Think of ways to include photos of the existing landscape along with examples of what the greenway could be.

Gain Traction

Sharing a thoughtful idea, showing you have done some homework, and inviting input and collaboration can win you the allies necessary to advance the potential greenway.

Because you took the time to develop a map and a description, you have something to *talk about*. So go talk! Don't be afraid to start with your local elected or appointed officials. Mayors, councilpersons, planning and zoning board members – they are in these positions because they want to support positive change in the community. Check with your municipality for office hours or work sessions and schedule an appointment. It also makes sense to contact your local planning, engineering, or park and recreation departments. (Even in municipalities where there are not full time planners or engineers, it may be possible to meet with “on-call” consultants). These are also the people who can help to shape and mold your idea to fit within current initiatives and plans. They can also provide insight into pitfalls to avoid and best practices to develop your idea for eventual public input and collaboration.

It is also important to cultivate the grass roots effort that will advance the greenway idea. Form a volunteer group, a team with diverse backgrounds, partnerships, and talent. Consider visiting local or county commissions, committees, or groups that deal with transportation, parks and recreation, or environmental issues. You may also find willing contributors with your local Green Team, Rotary Club, Kiwanis, county or municipal planners, AARP, church groups, corporate groups, scouts, and other groups in the community.

The more you converse about the greenway idea, the more you will be forced to think critically about it. Some conversations will become routine and repetitive. Others will reveal nuance and insight that either support or challenge your endeavor. Keep track of what people ask, the questions that are asked frequently, and the questions that are difficult to answer. When you do not have an answer, the best course is to say so, keep track of the question, and work for an answer through additional research or conversations with others who can provide guidance.

Form the Team

Talent List for Grass Roots Group



- Lawyer
- Realtor
- Planner
- Landscape Architect
- Engineer
- Architect
- Artist
- Ecologist
- Biologist

“Feasibility Lite”

Assuming the potential greenway has been generally well received, it likely merits a critical assessment from a feasibility perspective before advancing to future steps of planning, public input, and design. No one expects a group of volunteers to conduct a full-blown feasibility study on their own. But, an effort by volunteers to go the extra mile in defining the potential greenway and critically assessing its place in the community can go a long way in building support from the public and stakeholders.



Feasibility Lite: Answer 4 Key Questions to explore the greenway idea

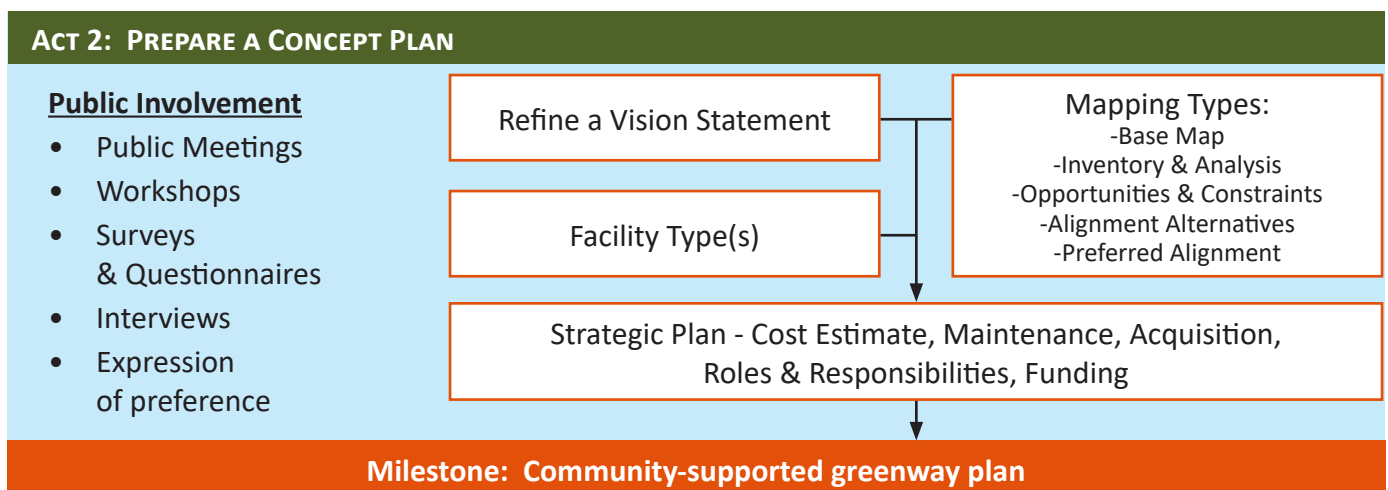
1. Where is it?
2. What is it?
3. How will it help the community?
4. What are the obstacles?

Work together to develop answers to the four “Feasibility Lite” questions. Use the collective creativity and passion of the team to document those answers in a report with maps and photos. With this, you will have a tangible product upon which to continue the campaign to develop the greenway.

The “Feasibility Lite” questions are an important litmus test for the potential greenway and for the project initiators. They enable project initiators to critically assess the idea and provide an inflection point to ask themselves, “*What am I really willing to do to make this happen?*” Being honest about the reality of a project can save valuable time and energy resources for all involved.

Act 2: Prepare a Concept Plan

Assuming there is a desire to proceed, a concept plan is the next step that will further define the potential greenway through an open, community-oriented process. The key outcomes of a concept plan are a vision statement and mapping of key data, opportunities, and constraints. These help to determine the preferred greenway route and access points. A concept plan will also determine the preferred facility type, features, and furnishings, as well as help all involved to understand and plan for estimated capital costs, maintenance, and land access and/or acquisition.



Working with Consultants

Developing the concept plan is an exciting time. You will be exposed to new information and insight into the general study area, your community and civic processes, and greenway planning as a whole. While local, county, and/or state government professionals remain a great resource, it is likely that they have many responsibilities and simply not enough hours in the day to lead the development of a concept plan. For this reason, it is common to hire a consulting team that may consist of planners, landscape architects, and/or engineers to manage the concept plan project in collaboration with a project manager from local, county, or state government, and a steering committee.

Public Involvement

Public involvement is a key ingredient for any concept plan. As you work with professionals to develop a concept plan process, public outreach will be a significant component of the effort. There may be public meetings, design charrettes, pop-up events, surveys, questionnaires, interviews, and many other methods to consider.

Vision Statement

A key component of the concept plan will be to formulate a vision statement for the greenway. A vision statement describes how the greenway should look and function within the community. The vision statement is formulated through public input, serves as a benchmark against which design alternatives will be evaluated, and keeps the project on target in future phases of development. If your greenway is anticipated to be a long-term phased development, the vision statement will be the glue that holds it together over many years!

PUBLIC INVOLVEMENT

Greenways are for the people and by the people. Therefore it is important that the concept plan be produced through a process open to the community and built on public input. The concept plan should also be defensible, meaning that the plan evaluates the potential greenway from every conceivable angle, providing evidence of need, compatibility, benefit, and impact.

VISION STATEMENT EXAMPLE

“Stretching six miles around the southern half of Jersey City, the Morris Canal Greenway is a world-class bicycle and pedestrian destination. Built upon one of the City’s greatest historic resources, the Morris Canal, the greenway celebrates the City’s industrial past while providing safe and convenient access for residents and visitors to neighborhoods, parks, schools, businesses, attractions, and transit. The Morris Canal Greenway is both an educational tool for displaying Jersey City’s history and regional significance and a lasting source of community pride.”

City of Jersey City, Morris Canal Greenway Plan, 2013

COMMON DATA FOR GREENWAYS MAPS

Demographics

Parcels (Tax Maps)

Zoning

Open Space and Recreation

Transit (Bus, Rail, Ferry)

Topography

Watercourses

Historic Properties

Wetlands

FEMA Floodplains

Historic Properties

Threatened & Endangered Species

Schools & Universities

Police, Fire, City Hall, Hospital

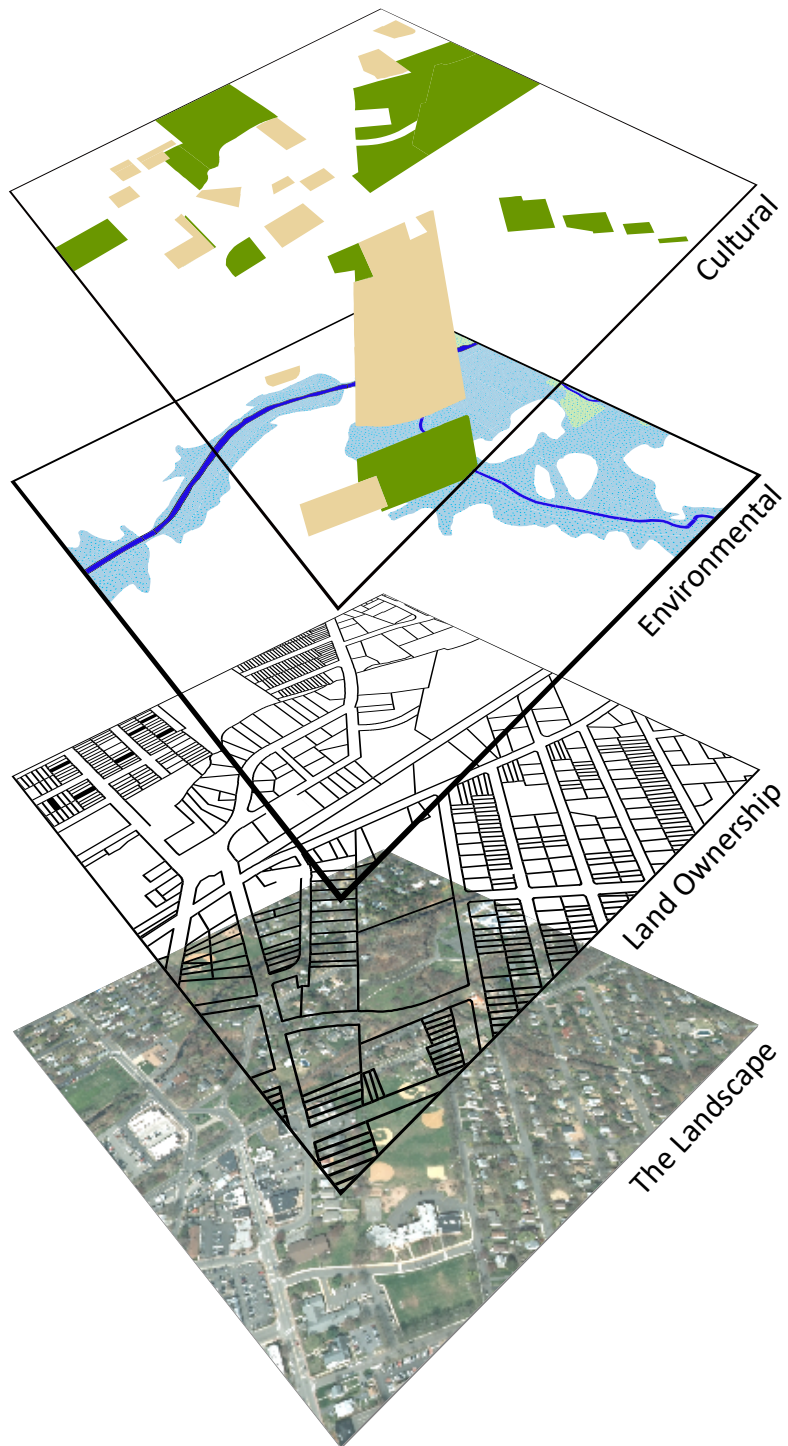
Commercial Districts

Places and Borders

Overlay Mapping

Think back to the map you initially developed in Act 1. It may have been rough or rudimentary and it most likely represented your direct experience, familiarity, and preferences related to the terrain and study area. As the concept plan process unfolds, there will be a methodical step to inventory and map a wide range of information related to the study area and surrounding communities. Some of this effort will involve interpreting map data that is developed and maintained by government agencies. Some of this effort will involve collecting data that is unique to the study area, either through direct field reconnaissance, aerial photo interpretation, or some combination thereof. Finally, some of this effort will involve community input to identify general preferences and trends related to the study area. (Caution: Not all datasets are created equal. Be prepared to verify the accuracy of map data in the field!)

By overlaying these inputs, an objective understanding will be developed to identify opportunities and constraints, and to guide the development of possible alignments, access points, and connections for the greenway.

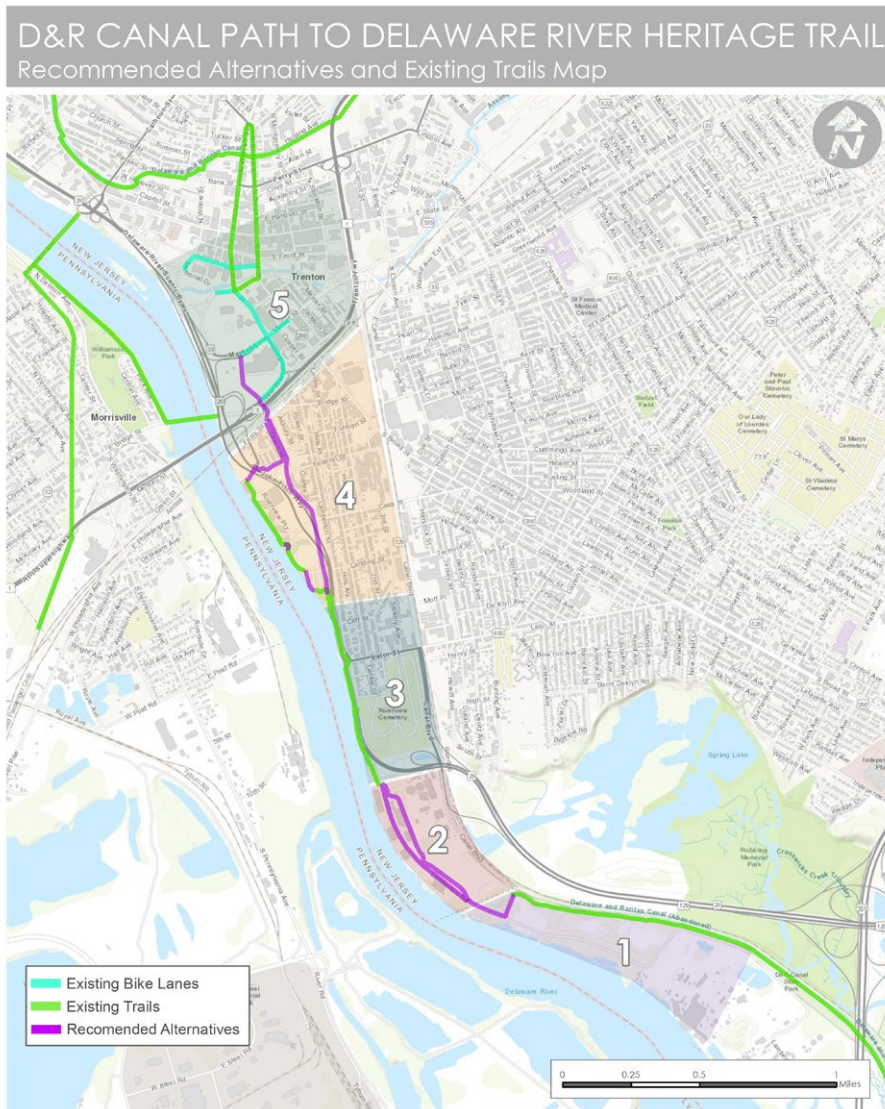


Preferred Greenway Alignment & Access

The key to developing a greenway alignment, or route, is to balance the objective outcomes of overlay mapping and predictions of cost, constructibility, and environmental impact, with community preferences and perceptions of aesthetics, convenience, recreation value, and other factors.

In general, the task of identifying a preferred greenway alignment should directly integrate public input and clearly define the benefits and drawbacks among alternatives in order to arrive at a consensus. Each route alternative, and especially the preferred alignment, should be evaluated against the vision statement to ensure compatibility with the shared community vision for the greenway. This process also involves identifying, comparing, and selecting the ideal locations for greenway access.

A general understanding of how adjacent or potentially affected land owners may support or oppose the greenway concept is another key input that can affect alignment. Proactive outreach should be made to such land owners. When land owners object, it may lead to gaps in the continuity of the greenway or to routing decisions that are less than ideal due to cost, environmental impact, or other factors. Phasing, including short-term and long-term alignments for the greenway, can also be discussed during this process and may present potential solutions when land access or acquisition issues arise.



Source: D&R Greenway Land Trust, 2019

PHASING, SHORT-TERM AND LONG-TERM

A great greenway is worth waiting for, so greenway projects will often be phased into minimum operable segments developed as separate projects. This helps to make construction costs more acceptable, especially when a municipality developing a greenway through federal funding programs needs to provide matching funds.

Greenway initiators should recognize that, although phasing can add to the project timeline, it can be the most effective, and sometimes the only way, to construct a greenway.

Concepts to establish a bicycle route between the D&R Canal Path and the Delaware River Heritage Trail in Trenton

Facility Type & Features

Determination of the facility type and features is another key outcome of the concept plan. While the alignment and access points define *where* the greenway will go, the facility type and features define *how* the greenway will look and feel. The selection of a facility type and features is directly related to the terrain and context, community preference, and predicted costs, phasing, and maintenance capacity. The process to determine the facility type and features should include an order-of-magnitude cost estimate and answers questions like:

- Is the greenway a hiking and biking trail, a shared use path, or a promenade?
- How wide should the greenway surface be?
- What type of surface is appropriate and preferred? What can be maintained?
- What is the level of finish? Is it rustic, high end, or something in between?
- What types of furnishings and amenities should there be along the greenway and at trailheads or access points?
- How will the greenway cross roads, watercourses, or railroad tracks?
- Will there be comfort stations?
- Will there be on-road segments? How will they be designed?
- For longer greenways, how does the context change from urban, suburban, or rural? How will the facility adapt?
- Are these decisions compatible with the vision statement?

Plan for Operations and Maintenance

Who will maintain the greenway once it is constructed? This is a key question, and it is important to meet with public works officials to discuss maintenance procedures and capacity prior to advancing the design. Practical maintenance starts with thoughtful design, and public works officials can be an important source to review design proposals and explain considerations for how their personnel, machinery, and fleet vehicles may or may not be compatible with a greenway vision. When a greenway traverses multiple jurisdictions, it will be necessary to meet with multiple officials and work to agree upon maintenance standards and responsibilities.

ACCESS AND CONVENIENCE

Greenways should be designed for enjoyment and use by people of all ages and abilities. Consider all users, from ages 8 to 80. Provide benches and seating so that people can take a rest and enjoy the atmosphere. Provide trailheads with drinking fountains and clear signage. Provide wayfinding signage to keep everyone oriented. Use the principles of Crime Prevention Through Environmental Design to keep sight lines open and help greenway users feel secure.

Plan for Land Access and/or Acquisition

The concept plan will identify the hurdles that may exist to obtain a right-of-way for the potential greenway. The process of obtaining land access rights or acquiring land will differ in scope and complexity from greenway to greenway. In some cases, it can be straightforward – the local and/or county government may already own the land and be happy to put it to use. In other cases, it may be necessary to deal with multiple land owners whose support for the greenway may vary.

The question of when and how to engage the landowners in discussion or negotiation can be a sensitive topic. There are government professionals and consulting companies that specialize in

land access and acquisition at the institutional level, some with specialties in railroads or utilities, who can offer guidance and help to devise and execute an approach. As a rule of thumb, it is important that potentially impacted land owners or neighbors be proactively informed of potential greenway ideas and

FARMLAND

Farmland is among the most open and scenic land available in New Jersey and can attract the attention of greenway initiators. But farmland, even farmland preserved through the New Jersey Farmland Preservation Program, is not public land. However, should a farm owner be interested in allowing a greenway to pass through or along the farm property, there are access agreements that can be negotiated, even for preserved farmland, including deeds of easement, voluntary condemnation, and exception areas.

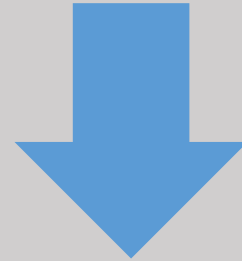
advancements, and that their voices and concerns be heard and respected. Building support for a greenway can be a long process that involves building trust and showing people in concrete ways how a greenway facility can be a benefit for all parties involved.

Another key question is to determine what entity will ultimately own the greenway. Typically, greenways are owned by government entities, but there are examples of grassroots organizations maturing into greenway owner/operators over time.

Take advantage of the concept plan process to think strategically about the implications of land access and/or acquisition as they relate to the potential greenway. Work toward a strategy that is open, collaborative, and meets the least resistance. Coordinate with government officials and agencies at all levels to understand how the potential greenway can relate to potential or planned land acquisitions through those offices. Be attentive to large-scale preservation projects as well as limited easement acquisitions.

Start with an Idea

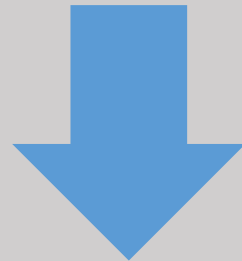
**Act 1:
Get Started &
Gain Traction**



**Act 2:
Concept Plan**



**Act 3:
Design Development,
Engineering, & Construction**



**Act 4:
Activation, Operations, &
Maintenance**



Success!

Develop a Strategic Plan

A strategic plan formalizes how the greenway initiative will advance and who will do what and when, by defining the strategies, actions, timeframe, and roles/responsibilities to move forward. A good strategic plan will provide a clear understanding of the next steps and a path forward that identifies discrete, executable tasks.

This page from the *Middlesex Greenway Access Plan* (Together North Jersey, 2014) is an example of how strategic actions can be laid out and assigned for a targeted and effective implementation over time.

ACCESSIBLE GREENWAY

Strategies	Actions	Timeframe	Lead Partner	Actors
Enhance physical access to the greenway through bike and pedestrian improvements ●●●				
Resources/Sources of Funding: NJTPA, NJDOT Bicycle & Pedestrian Planning Funds, NJ Bicycle & Pedestrian Resource Center, Property Owners, Business Owners				
Plan and implement bike and pedestrian improvements along main thoroughfares including CR-501, CR-616, CR-514, and King Georges Post Road	Conduct a planning study on the potential for bike and pedestrian improvements along major thoroughfares, including bike lanes, shared lanes, and wider, better maintained sidewalks	Medium	MC Planning	Middlesex County Planning, Middlesex County Transportation, Middlesex County Engineering, Borough of Metuchen, Township of Edison, Township of Woodbridge, NJTPA, NJ Department of Transportation
	Secure funding	Medium	MC Planning	
	Implement improvements	Long	MC Transportation	
	Adopt or implement Complete Streets policy (Edison)	Long	Edison Planning Department	
Enhance bike and pedestrian accessibility on local/other roadways that connect to the greenway and transit stops	Conduct a planning study on the potential for bike and pedestrian improvements along local roadways, especially those that connect to greenway access points	Short	Local Planning Departments	Borough of Metuchen, Township of Edison, Township of Woodbridge
	Secure funding	Long	Local Planning Departments	
	Implement improvements	Long	Local Transportation Departments	
Expand availability of secure bicycle parking at key destinations including commercial districts, schools, transit stops, parks along the greenway, etc.	Inventory bike racks and bike parking availability in downtown and commercial districts, access points near the greenway, near schools, near transit stops, and at centers of employment	Short	Local Planning Departments	Middlesex County Planning, Borough of Metuchen, Township of Edison, Township of Woodbridge (ABC Committee), Keep Middlesex Moving, Bike/Walk Metuchen, Chambers of Commerce, Property Owners, Developers, NJ TRANSIT
	Install bike racks in key places based on inventory	Medium	Local Planning Departments	
	Pilot use of a surface vehicle parking spot for bike parking during off-peak hours	Short	Municipal Parking Authorities	
	Encourage or incentivize developers to incorporate increased bike parking in new developments	Long	Local Planning Boards	
Enhance physical access to the greenway through expanded vehicle parking				
Resources/Sources of Funding: Property Owners, Business Owners				
Expand parking space by encouraging dual/flex parking space for local business/institutional use and greenway use	Work with Tano Mall tenants (highlight potential for increased customer base) to negotiate with Tano Mall property owners on use of underutilized surface parking space for greenway parking	Short	Edison Greenways Group	Middlesex County Parks and Recreation, Edison Greenways Group, Tano Mall Tenants, Tano Mall Property Owner, Herbert Hoover Middle School Administration, Edison Board of Education
	Coordinate with Herbert Hoover Middle School to use parking space for greenway parking during off-peak hours	Short	Edison Greenways Group	
Incorporate dual/flex parking strategies into future development and redevelopment near the greenway	Encourage developers to incorporate dual/flex parking for greenway users by highlighting benefits (increased customer base) or through incentives	Long	Local Planning Boards	Borough of Metuchen, Township of Edison, Township of Woodbridge, Chambers of Commerce, Middlesex County Economic Development, Middlesex County Planning
	Adopt a policy that encourages or incentivizes dual/flex parking	Long	Local Planning Boards	

Source: Middlesex Greenway Access Plan, Together North Jersey, 2014

Act 3: Design Development, Engineering, and Construction

The concept plan will guide design development - the process that articulates the additional levels of detail that are necessary to construct the greenway. Design development is conducted by professional engineers, landscape architects, and/or architects and will vary in scope based on the complexity of the greenway. The transition from the concept plan to design development involves a significant handoff in effort. Whereas the concept plan may have been a very “hands on” experience for greenway initiators, the design development process is more technical in nature and thus requires professional involvement.

ACT 3: DESIGN DEVELOPMENT, ENGINEERING, & CONSTRUCTION

Public Involvement

- Groundbreaking Event
- Communication & Progress Updates
- Ribbon Cutting Event

Design & Engineering

Permitting

Acquisition

Construction

Milestone: Constructed greenway

Construction Contract Documents

The objective of design development is to produce a set of construction contract documents that put forth a responsible design for the greenway that is ADA-accessible, satisfies regulatory requirements (permitting), meets established design standards (liability), and is constructible. Construction contract documents provide the information necessary for construction contractors to provide accurate bids on a level playing field, and to guide the entire construction process. Construction contract documents include:

- Technical design (blueprint) of the greenway alignment
- Detailed design of greenway elements (paving systems, retaining walls, bridges, culverts, etc.)
- Details of furnishings, finishes, and plant palette
- Detailed specifications for all necessary products

Development of construction contract documents is led by an engineer, landscape architect, or architect. Depending on the complexity of the greenway, municipal or county staff may be able to produce the construction contract documents in-house; however, it is often more expedient to hire a professional consulting firm for the task. In that case, a municipal or county level design professional would likely take the role of project manager to interface with the consultant team.

The process to develop construction contract documents for a greenway involves a site survey, advanced concept design, permit applications, final draft design, and final contract documents.

Site Survey

A professional survey of the proposed greenway corridor establishes accurate and precise inventories and measurement of properties, existing features, and grades. This step may include field delineation of sensitive areas such as wetlands. The scope of a professional survey can be written to suit a given project and can vary to include inventory and location of utilities, drainage features, trees, or other site-specific features.

ASSEMBLE A DESIGN TEAM

Municipalities and counties vary the manner in which professional design staff are assigned to projects. The time commitment required to develop construction plans for a greenway can be quite extensive, so consultant teams are often hired to assist municipal or county design staff. Assemble a design team with the diverse expertise and track record to cover planning, site engineering, aesthetics, environmental design and permitting, traffic engineering, structural engineering, cost estimating, construction administration, and public outreach and communication.



Advanced Conceptual Design

Based on the survey and the concept plan, an advanced conceptual design is developed to minimize impacts to sensitive areas, preserve existing landscape assets (trees, utilities, etc.), ensure the design complies with the Americans with Disabilities Act, and ensure that maintenance and emergency vehicles have appropriate access. At this stage, decision-makers and perhaps the public will convene to offer insights and preferences. A detailed cost estimate, accounting for alternatives as necessary, may also be developed. For greenways with a phased implementation, the advanced conceptual design may address the entire greenway concept or may only develop a specific area with rational endpoints. Meetings should also be held with potentially impacted property owners, public works departments, utility companies, and other entities to ensure that any issues or concerns can be addressed.

Permitting

From the advanced conceptual design, designers can progress to the next milestone of design development: permitting. At this stage, the design is typically 60% complete and is comprehensive to the point where regulatory agencies can review the potential environmental impacts and grant permits.

In New Jersey, this regulatory process is overseen by the New Jersey Department of Environmental Protection (NJDEP). NJDEP generally requires the following approaches to permitting environmental impacts:

- (A) Project sponsors should first try and avoid regulated areas;
- (B) If impacts to regulated areas cannot be avoided in order to meet the basic purpose and need identified for the project then impacts to regulated areas should be minimized to the greatest extent practicable that would satisfy the purpose and need of the project;
- (C) Any impacts to environmentally regulated areas will generally have to be mitigated, and there are standard procedures available to accommodate mitigation

Regulated areas include:

- Wetlands, Waters and Wetland Transition Areas
- Watercourses/Floodways, Floodplains, Flood Hazard Areas
- Historic Structures/Historic Districts/Archaeological Sites
- Green Acres/Parkland/Open Space
- Brownfield Sites/Hazardous-Contaminated Material Sites
- Socioeconomics/Environmental Justice
- Air & Noise

ADDITIONAL INFORMATION ON PERMITTING

The process to obtain construction permits through the New Jersey Department of Environmental Protection will vary from project to project.

A key benefit of greenways is that, although regulated areas like Green Acres and historic districts are accounted for in the permit process, the greenway itself is often necessary to make these resources accessible to the public. There are also existing processes that can authorize construction of trails and greenways on wetlands and transition areas.

For more information on NJDEP permitting, visit: <https://www.nj.gov/dep/landuse/process.html>

Land Access and/or Acquisition

From the advanced conceptual design, a final strategy for land access and/or acquisition will be identified and executed. The design team can support the acquisition process through site survey, property assessment, mapping, and filing of agreements for access and easement, or through other services as needed. Strategizing, appraising, and negotiating land access and acquisition is a specialized practice. There may be experts available to lead the process through local, county, or state government; or, in some cases a consultant will need to be brought on board.

Also at this stage, the final decisions on greenway ownership and maintenance responsibilities should be formalized.

Final Draft Design and Specifications

With the design permitted and accounting for any revisions necessary to obtain permit approval, designers can advance to the next milestone of final draft design and specifications (also called the 90% submission). At this stage, the design is nearly final, though some decisions may remain outstanding and require resolution. An important component of this stage is the development of construction specifications, which provide written guidance for all materials and products to be obtained in the construction process. A final cost estimate is also developed and will be used as a benchmark to evaluate bids from construction contractors.

Final Contract Documents, Bidding, and Award

When all design decisions have been resolved, the design team produces the final contract documents. From this point, the greenway owner will put the project out to public bid. Construction contractors track this type of bidding opportunity and will use the final design layout, details, and specifications as the basis to estimate the necessary construction work. Construction contracts through government entities are typically awarded to the lowest responsive bidder.

LAND ACQUISITION VOCABULARY

Temporary Binding Agreements

- Management Agreement
- Formal Land Lease
- Long-Term Lease or Permit

Easements

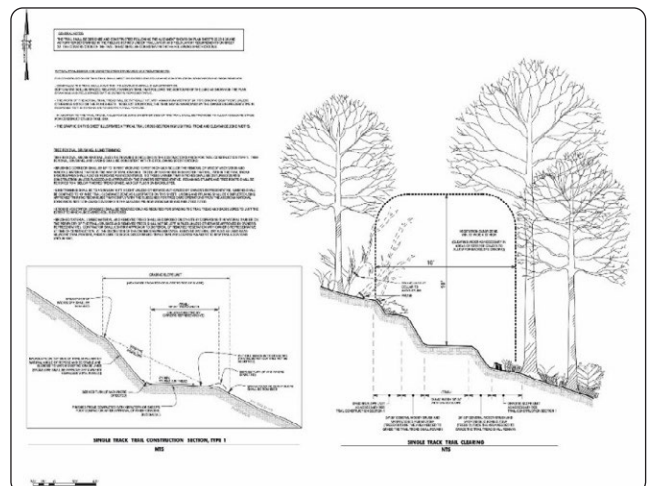
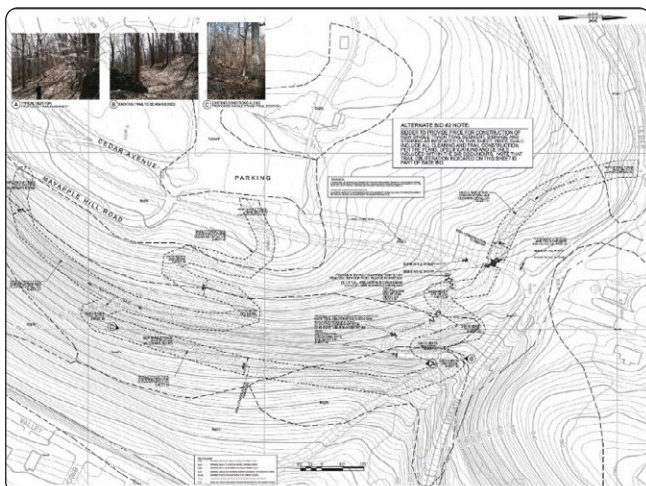
- Affirmative Easement
- Negative Easement
- Right of Public Access Easement
- Conservation Easement
- Preservation Easement
- Joint-Use Easement

Securing Title

- Fee Simple Acquisition
- Donations/Gift
- Purchase and Lease Back
- Option, or Right of First Refusal

Purchase of Development Rights

Condemnation



These technical drawings are pages from a set of construction contract documents for a greenway.

Groundbreaking

Once the construction contract is awarded, it is common to hold a groundbreaking ceremony to celebrate the milestone and recognize the many people who have contributed to the development of the greenway. For such an event, it is common to invite elected officials, funding agencies, land owners, government and consulting professionals, and the grassroots volunteer groups who are often the catalyst behind this type of project.

The groundbreaking ceremony is an opportunity to invite press coverage and inform the public that the new greenway asset is within reach. It is a great time to build buzz around the project. Consider exciting ways to document the process of change, such as a time lapse camera or drone photography along the construction site.



Groundbreaking of a segment of the D&R Canal path, Trenton

Construction Activity and Administration

Construction activity is both exciting and challenging. Some community members will be excited to see construction vehicles and the process of change happening before their eyes. Others may lament the temporary parking and staging areas that are necessary for construction vehicles and materials, the noise, and occasionally the need to take an alternative route to get somewhere. Design teams anticipate and minimize construction impacts to the greatest extent possible.



Trail construction at the South Mountain Reservation, Essex County

Construction administration primarily consists of having the greenway owner or an owner's representative available to interface with construction contractors and resolve issues in the field and inquiries related to construction methods and materials. Construction administration can be carried out by professionals in government (the owner) or consulting (the owner's representative).

Ribbon Cutting

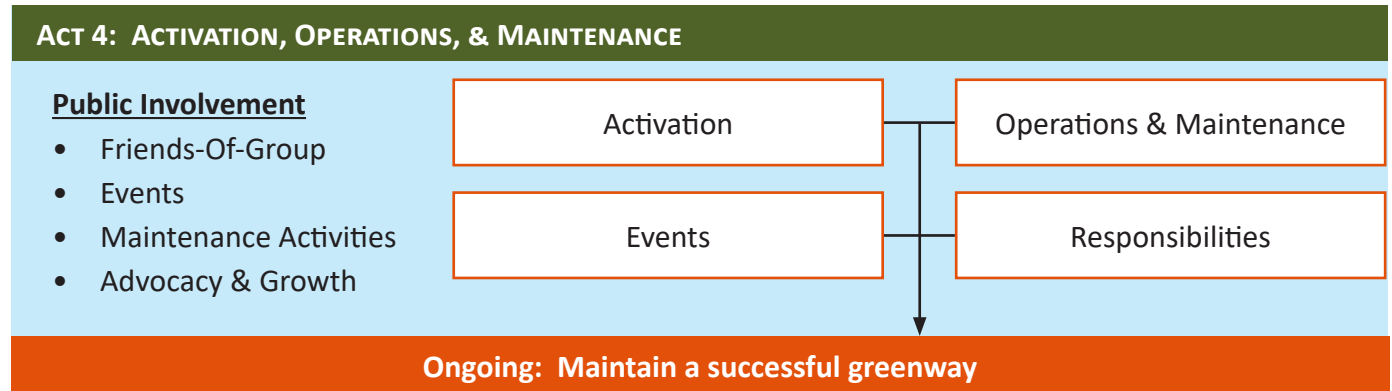
Once construction is complete, it is time to hold a ribbon cutting ceremony. The ribbon cutting is the bookend to the groundbreaking ceremony and should include a similar list of invitees including elected officials, funding agencies, the design team, the volunteer group, the construction crew, and the public. This is an opportunity for people to access and use the greenway facility for the first time. It is an exciting moment in the community and a time to celebrate! It is also an excellent opportunity to recruit greenway ambassadors and other volunteers willing to support the greenway and even contribute to maintenance efforts over time.



Kinkora Trail in Mansfield Township, Burlington County, NJ

Act 4: Activation, Operations, and Maintenance

Activation begins operation and use of the greenway and occurs in various forms throughout the life of the greenway. For example, the initial activation may open the greenway for public use predominantly by local residents. A subsequent activation may reveal historical and/or ecological interpretive signage, art, or exhibits and begin to market the greenway as a regional attraction. Activation can also occur when local entities, such as scouts or school groups, begin to use the greenway for new purposes. Activation is about the relationship of the community to the greenway and how it evolves over time.



Activation of a greenway through events and marketing attracts a growing audience of users and supporters, enhances community quality of life, promotes economic vitality, and creates educational opportunities. Proactive strategies for activation help the community recognize and support the greenway as wonderful asset. Strong community support can be a factor that affects the level of maintenance and attention the greenway receives over time.



MAINTENANCE VOLUNTEERS

Opportunities to contribute to maintenance activities should be made available to the public. There are scout groups, companies with community service days, and established organizations such as JORBA (Jersey Off-Road Bicycle Association) and the NY/NJ Trails Conference (northern NJ) that can offer help.

MAINTENANCE REALITIES

The Rails-to-Trails Conservancy published a study, *Maintenance Practices and Costs of Rail-Trails*, 2015. It is a great resource for greenway maintenance planning.

Operations and Maintenance

Operations and maintenance are the cost and effort to ensure that greenway facilities remain in a physical state that supports acceptable use and performance. When there are multiple owners, it is important to communicate and agree upon consistent rules, regulations, and practices.

Planning for operations and maintenance begins during the concept plan. Greenway initiators should involve public works or other maintenance stakeholders early in the design process. Funding for maintenance is more difficult to obtain than funding for capital to build the greenway, so the design of the greenway should involve real consideration of operations and maintenance practices and limitations.

Management Plan

A management plan for a greenway will formalize operations and maintenance and should be explored and drafted during the concept plan, finalized during design development, and executed at activation. A good management plan will identify day-to-day, periodic, and long-term efforts, assign responsibilities, and secure funding sources.

- Day-to-Day: Removal of debris, emptying trash/recycling receptacles, cleaning comfort stations, daily activities such as scheduling, responding to/recording incidents or concerns, and coordinating greenway programs
- Periodic: Mowing, litter cleanup, pruning
- Long-term: Annual inspection of surfaces, structures, safety railing, catch basins, signs, etc. is a necessary procedure for overall safety and liability and should be documented with appropriate checklists

Operations and maintenance **standards** define the acceptable benchmark levels to which greenway facilities should be maintained. Standards help to track and predict the cost and effort associated with operations and maintenance and can be formalized over time in a policy.

Operations and maintenance **responsibilities** vary based on ownership, existing agreements, capacity of government organizations, and capacity of supportive organizations (nonprofits/volunteer groups) to contribute to maintenance. Shared services can benefit the greenway by establishing agreements on operations and maintenance among multiple jurisdictions.

A maintenance oversight committee can be especially valuable for greenways maintained by multiple jurisdictions. It may be necessary to appoint a committee composed of representatives from each jurisdiction to meet periodically to review and plan maintenance standards, responsibilities, and activities.



Rules and regulations help to orient greenway users and make them feel comfortable sharing the facility with others.

“FRIENDS-OF” ORGANIZATIONS

In many cases, a nonprofit or volunteer group can form an effective relationship with paid staff in managing trails and greenways. The “Friends-Of” organizations can assume some of the responsibility for operations and management and can provide valuable support to burdened public works departments. When working out a management plan, it is important to maintain a realistic outlook on the level of effort and liability a volunteer group is truly able to assume in the long term.



Photo: Middlesex County Office of Parks and Recreation

Middlesex Greenway

“Make no little plans; they have no magic to stir men`s blood and probably themselves will not be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will never die...”

Daniel Burnham

American Architect and City Planner

1846 -1912

Planning for Greenways

A Guidebook for New Jersey Communities



Sandy Hook, Gateway National Recreation Area, Monmouth County, NJ