





## CHAPTER 5 RECOMMENDATIONS

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This chapter describes the recommended route for the Patroon Creek Greenway. The recommended route was defined based on feedback from the project’s advisory committees and the public, the alignment analysis, and the overarching project goals to provide equitable access, increase connectivity, enhance quality of place, and improve public health. To ensure the future Greenway not only serves as a conduit for moving people from one place to another, but as also provides a unique experience that enhances the public realm, increases access to nature, and expands recreational opportunities several recommendations related to community connections, access points, wayfinding, native landscaping, and placemaking are also made.



## RECOMMENDED GREENWAY ALIGNMENT + FACILITY TYPES

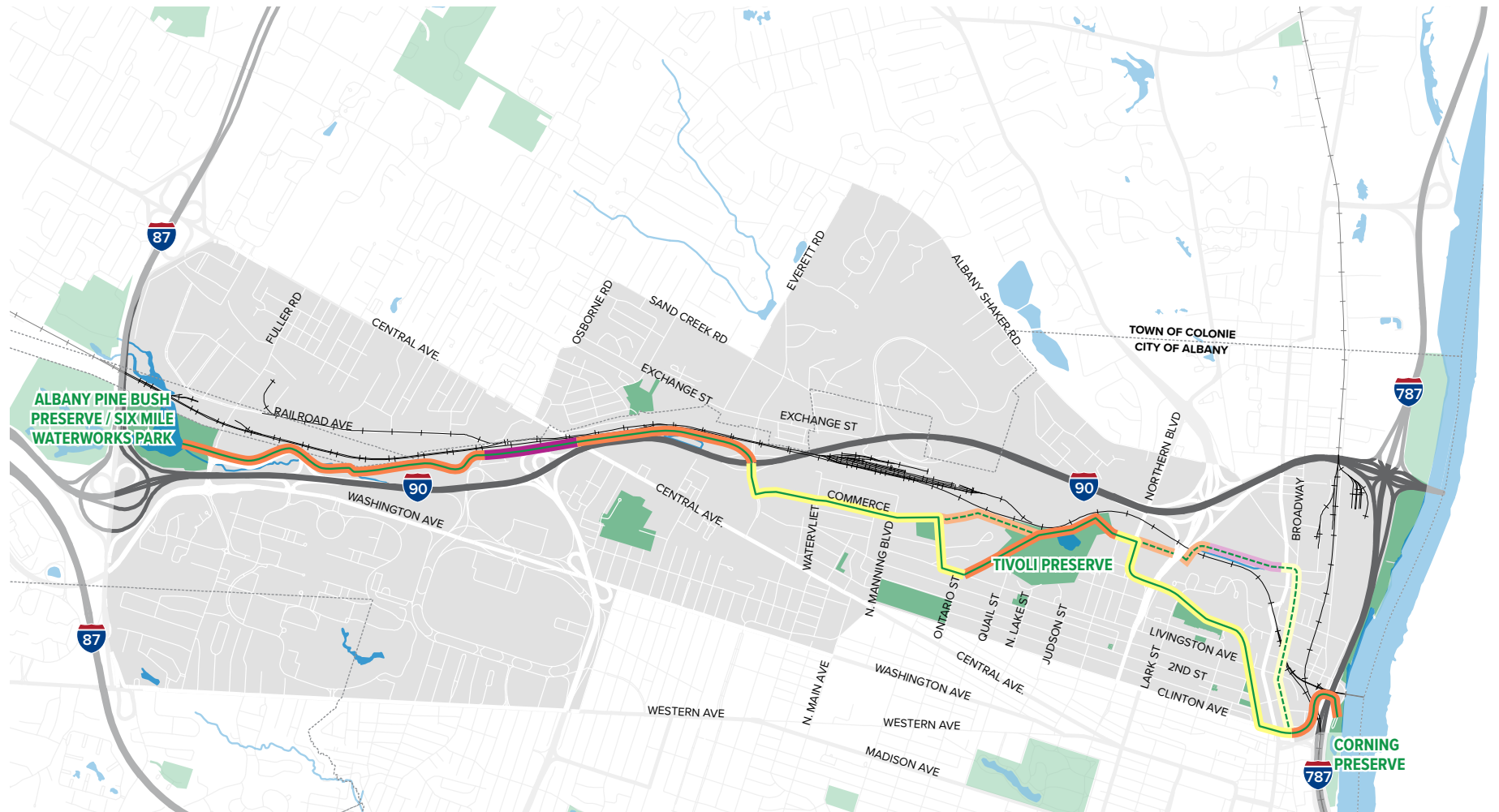
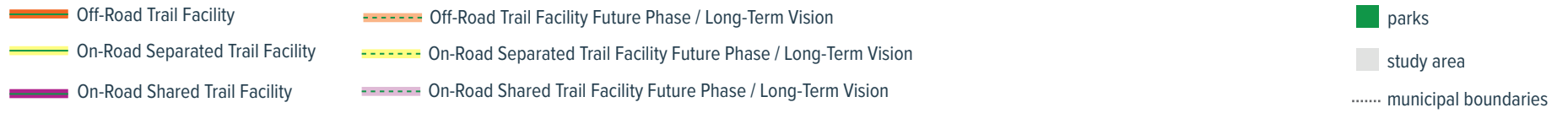
This section identifies and describes two recommended alignments for the future Patroon Creek Greenway: one that can be implemented relatively soon and another longer-term option that enables the Greenway to follow the entire length of Patroon Creek. The recommended alignments were selected based on their ability to achieve the project's goals, the results of the alignment analysis, and feedback from the project advisory committees and the public.

### Recommended Alignment

From the Albany Pine Bush Preserve / Six Mile Waterworks Park east to the Hudson River waterfront, the following alignments and trail facility types are recommended for the Patroon Creek Greenway:

- Crossing Fuller Road:** Two different crossing options were explored for crossing Fuller Road in Chapter 5. Immediate improvements should focus on creating an enhanced at-grade trail crossing, including: widening the existing crosswalk and installing new ramps and detectable warnings, installing user-activated Rapid Rectangular Flashing Beacons (RRFBs), and expanding the existing median refuge island. The crosswalk should also be aligned to ensure there is sufficient vehicular storage adjacent to the round-a-bout exit for cars to stop and yield to trail users. Despite these immediate improvements, Fuller Road will likely remain challenging for pedestrians and cyclists to cross. As such, the proposed pedestrian bridge evaluated in the alignment analysis should also be considered as implementation of the Greenway advances.
- Fuller Road to Central Avenue:** CA-1a is the recommended alignment in the near-term. This option provides an off-road trail, roughly paralleling the Patroon Creek and then transitions to a shared roadway along Yardboro Avenue with an improved sidewalk for pedestrians. Given the proximity to Patroon Creek and lack of existing street trees, the installation of green infrastructure along Yardboro Avenue is also recommended to help manage stormwater runoff and enhance the experience along this portion of the Greenway.
- Crossing Central Avenue:** In the near-term, signalization of the Yardboro Avenue / Central Avenue intersection is recommended for further study and potential implementation. Given the site distance issues and high vehicular traffic volumes at this location, the pedestrian bridge evaluated in the alignment analysis should also be pursued as implementation of the Greenway advances.
- Central Avenue to Everett Road:** CR-1b is the recommended alignment for this section of the Greenway. This option provides an off-road trail along the Patroon Creek, a new embankment to connect the trail to Everett Road Bridge, and ecological restoration along the creek. Not only are there several funding sources currently available focused on pairing transportation improvements with natural infrastructure to increase climate resiliency, improving the overall health of the creek will enhance trail users' experience, mitigate flooding, and improve water quality.
- Everett Road Bridge:** The reconstruction of Everett Road Bridge to include a separated multi-use path across both the railroad and I-90 is critical to the success of the Patroon Creek Greenway as well as to improving connectivity between the Town of Colonie and the City of Albany. It is also anticipated that the portion of the Patroon Creek Greenway between Central Avenue and Everett Road, which is approximately 17-feet below Everett Road Bridge, is contingent on the reconstruction of this bridge.
- Everett Road to Tivoli Preserve:** IN-1 is the recommended alignment for this section of the Greenway. This option provides the most direct connection to the West Hill neighborhood and uses public right-of-way to create a separated shared-use path along Everett Road, Watervliet Avenue Ext., Commerce Avenue, and Terminal Street. At the intersection of Terminal Street and Livingston Avenue, the trail proceeds east about two blocks and then heads north onto Albany Water Board property and enters Tivoli Preserve where it transitions to an off-road facility. The trail facility along Livingston Avenue requires further outreach to residents — a two-way separated bike lane could be created if on-street parking is removed and the roadway is narrowed. However, there is currently only one lane of on-street parking along this section of Livingston Avenue and there are several residences with no access to off-street parking. Alternatively, a shared roadway with traffic calming could be provided along this short stretch of Livingston Avenue to minimize impacts to existing on-street parking.

## RECOMMENDATIONS: RECOMMENDED GREENWAY ALIGNMENT





# RECOMMENDED GREENWAY ALIGNMENT + FACILITY TYPES (CONT.)

- **Tivoli Preserve:** The construction of a new shared-use path is proposed through Tivoli Preserve to connect Livingston Avenue to N. Manning Boulevard, following Patroon Creek. All portions of the Greenway in Tivoli Preserve are recommended to be porous asphalt in order to provide an accessible surface and reduce stormwater runoff. As noted in Chapter 5, a pedestrian bridge will be needed to cross the spillway near the inlet of Patroon Creek into the Preserve. Finally, to prevent unauthorized motor vehicle access, gates or other physical structures narrowing entryways should be placed at all entrances into Tivoli Preserve.
- **Tivoli Preserve to the Albany Skyway:** NE-1 is the recommended alignment for this section of the Greenway. This option provides the greatest connectivity to public transit, other bicycle and trail infrastructure, bikeshare stations and other community destinations, such as schools and parks, of all the trail alignments evaluated. This option also entirely uses the public right-of-way. A shared use path is recommended along N. Manning Boulevard in front of KIPP Tech Valley Middle School and then a new shared-use path separated by an 8- to 10-foot wide landscaped buffer is recommended along the length of Northern and Manning Boulevards. This new separated shared-use path will require one lane of on-street parking to be removed. At the intersection of Manning Boulevard and Livingston Avenue, the Greenway continues along the west side of Ten Broeck passing Ten Broeck Mansion, Van Rensselaer Park, and St. Joseph's Park, and then proceeds east on Clinton Avenue to the Albany Skyway.

To accommodate the Greenway and enable the creation of a two-way separated bike lane, the removal of on-street parking along the west side of Ten Broeck is recommended in the long-term. However, further engagement with impacted residents and a parking study along Ten Broeck is recommended as an immediate first step to better understand the impacts of removing one lane of parking. Similarly, in order to identify the most suitable trail facility type along Clinton Avenue, additional engagement and design development of the trail is required and should be coordinated with other City efforts to improve the streetscape along Clinton and Livingston Avenues.

## Long-Term Vision for the Greenway

The long-term vision for the Patroon Creek Greenway is to follow the entire length of Patroon Creek and provide as much off-road trail as possible. A large portion of the trail alignment recommended in the near-term achieves this vision. However, at the intersection of Commerce Avenue and Terminal Street, the longer-term vision for the Greenway is to continue east along Commerce Avenue, transitioning to an off-road trail and wrapping around the Freihofer Factory to enter the western part of Tivoli Preserve (IN-2 in the alignment analysis). After traveling through Tivoli Preserve, the Greenway continues off-road past KIPP Tech Valley Middle and Elementary Schools, passes under the U.S. Route 9 bridge and then requires a new pedestrian bridge to cross the rail line and connect to Tivoli Street. The Greenway continues east along Tivoli Street and then south along Broadway as a separated trail facility to connect to the Skyway (NE-3 in the alignment analysis).

## TRAIL FACILITY TYPES: LIVINGSTON AVE.



**Option 1:** Shared roadway; on-street parking retained



**Option 2:** Two-way separated bike lane; roadway narrowed and on-street parking removed



### TRAIL FACILITY TYPES: MANNING BOULEVARD



**Recommended Long-Term Facility:** A new shared-use path separated by a landscaped median with green infrastructure; on-street parking is removed from one side of the road



**Short-Term Option:** If immediate connectivity is desired, striped bike lanes could be installed in the near-term along the full length of Manning Boulevard

### TRAIL FACILITY TYPES: TEN BROECK STREET



**Recommended Long-Term Facility:** A new two-way separated bike lane along the western side of the street (pending results of a parking study to better understand the impacts of removing one lane of parking)



**Short-Term Option:** Maintain the existing bike lanes along Ten Broeck Street



## NEIGHBORHOOD CONNECTIONS

Several new connections are recommended to increase access to the future Patroon Creek Greenway. These recommendations build upon existing and planned bicycle and trail infrastructure as well as propose new bicycle infrastructure to enhance neighborhood, intermunicipal, and campus connectivity to the future Greenway.

### Neighborhood Connections

Enhanced or new pedestrian and bicycle infrastructure is recommended along the following roads to improve connectivity between the Greenway and the Arbor Hill and West Hill neighborhoods:

- **Livingston Avenue:** This east-west corridor parallels the proposed Greenway and is home to several businesses, residences, and community resources, including the Underground Railroad Education Center. This corridor also experienced several crashes between 2016 and 2021, especially at the Livingston Avenue and Henry Johnson Boulevard intersection. Improved sidewalks and pedestrian crossing infrastructure are recommended along the length of this road. Additionally, new bicycle infrastructure should also be considered.
- **3rd Street:** This east-west corridor provides a direct connection between Ten Broeck Street and Watervliet Avenue. It also parallels the proposed Greenway and is home to several residences and community resources (e.g., churches). Improved sidewalks and pedestrian crossing infrastructure are recommended along the length of the road, and the bicycle boulevard recommended in the

City's Bicycle and Pedestrian Master Plan should also be implemented in coordination with the future Patroon Creek Greenway.

- **Colonie / Swan Street:** This north-south corridor provides a connection between the future Greenway, Arbor Hill Elementary School (via the pedestrian bridge), and Clinton Avenue. Improved bicycle and pedestrian infrastructure is recommended along the length of this road.
- **Lark Street:** This north-south corridor provides an important connection between the future Greenway, Arbor Hill Elementary School, the Albany International Center, and Clinton Avenue. In particular, students and teachers frequently walk along Lark Street between the two schools and sidewalk and crossing improvements are much-needed and should be prioritized.
- **Judson and Ontario Streets:** These north-south corridors provide connections between the future Greenway, parks (Tivoli Preserve via Judson and Swinburne Park via Ontario), residents, and Clinton Avenue. Improved bicycle, pedestrian, and crossing infrastructure is recommended along the length of these roads.
- **Watervliet Avenue:** This north-south road provides an important connection between the future Greenway, residents, Henry Johnson Charter School, and Central Avenue. In particular, several grocery stores are located on or near Watervliet Avenue and improved bicycle and pedestrian connectivity in this area would increase resident's access to food.

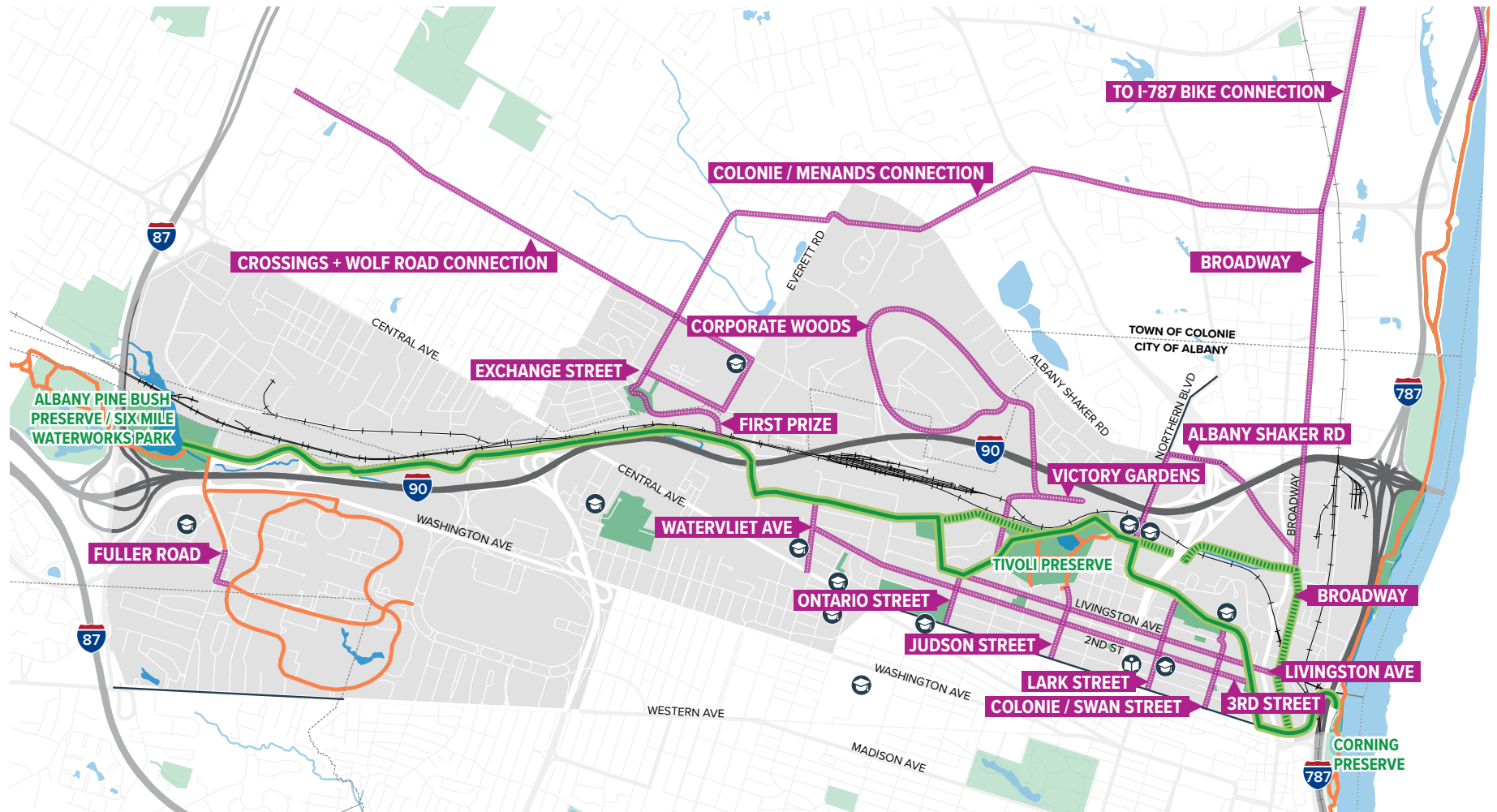
- **Albany Victory Gardens:** In addition to urban agriculture, this property is also home to an extensive mountain bike trail system. Utilizing an existing access easement the owner's of the Victory Gardens have with CSX, rehabilitation or replacement and then re-use of the abandoned rail trestle bridges is recommended to create a direct, separated rail crossing between Tivoli Preserve and the Albany Victory Gardens.

### Intermunicipal Connections

Improved pedestrian and bicycle infrastructure is recommended at the following locations to improve connectivity between the Greenway and neighboring municipalities:

- **Broadway:** Bicycle and pedestrian improvements are recommended along Broadway to increase connectivity between the City of Albany and the Village of Menands and advance the long-term vision for the Patroon Creek Greenway.
- **First Prize:** As part of the redevelopment of this site, a new pedestrian bridge is recommended over the railroad to connect future residents, the Town of Colonie, and the Colonie Pocket Park to the future Greenway.
- **Colonie / Menands Connector:** This proposed connection builds on the First Prize connection and continues north and then east using an electrical utility corridor to connect the Greenway to the Village of Menands and the I-787 bike connection to the Mohawk-Hudson Bike-Hike Trail.

## RECOMMENDATIONS: NEIGHBORHOOD CONNECTIONS



0 0.25 0.5 1 MILES



## NEIGHBORHOOD CONNECTIONS (CONT.)

- **Crossings + Wolf Road Connection:** Improved bicycle, pedestrian, and crossing infrastructure is recommended along Sand Creek Road to connect the Greenway to the Town of Colonie and major shopping destinations.
- **Northern Boulevard / Shaker Road / Loudonville Road:** Building on existing bicycle infrastructure (bike lanes) and recommendations in the City's Bicycle and Pedestrian Master Plan, providing continuous bicycle infrastructure from Northern Boulevard to Shaker Road to Loudonville Road would improve connectivity to Broadway, the City's warehouse district, and Menands.

### Campus Connections

Improved pedestrian and bicycle infrastructure is recommended at the following locations to improve connectivity between the Greenway and employment and educational campuses:

- **Corporate Woods:** The CDTC Capital District Trails Plan proposes a connection between Tivoli Preserve and Corporate Woods via an Albany Water Board parcel. This proposed connection would also require a new pedestrian bridge over I-90. Although this is likely a long-term project, this future connection would provide an important link between the Patroon Creek Greenway and Corporate Woods, which is a major employment center and is also home to several community services, including health care and daycare.
- **Fuller Road / Washington Avenue:** Bicycle and pedestrian crossing improvements at the series of round-a-bouts on Fuller Road are critical to providing a safe, comfortable connection between UAlbany, the future CDTA Purple Line, and the Greenway. To better connect the Greenway to UAlbany, additional bicycle improvements along Fuller Road are recommended as well as enhancements to and extension of the existing multi-use path along Washington Avenue.

### PRIORITY CONNECTIONS

The following connections have been identified by the City of Albany and stakeholders as high priority connections that should be implemented in the short-term and could be constructed prior to the Greenway. These connections would provide immediate benefits to the local community by expanding bicycle and pedestrian infrastructure:

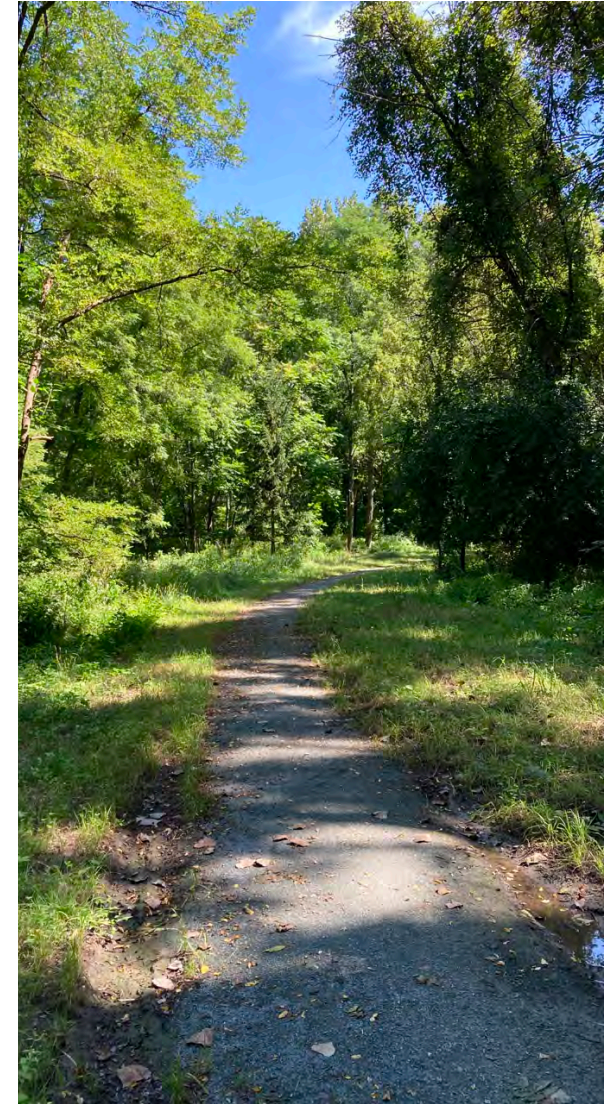
- **Broadway:** Identified as an important component of the City's future bicycle network, the installation of protected bicycle facilities would provide an important north-south connection between downtown Albany, the warehouse district, and Menands. This connection is also a key part of the long-term vision for the Greenway.
- **Livingston Avenue:** Pedestrian infrastructure improvements on Livingston Avenue, between Ten Broeck Street and Broadway, are a high priority due to their ability to improve connectivity between Broadway, the future Greenway, and existing transit stops and destinations along this corridor.
- **Lark Street:** An important local connector, pedestrian infrastructure improvements along this corridor would immediately benefit local schools and residents.
- **Northern Boulevard / Shaker Road / Loudonville Road:** Identified as a priority in the City's Bicycle and Pedestrian Master Plan, implementation of this connection would build on existing bicycle infrastructure to provide a continuous bicycle facility connecting Northern Boulevard to Broadway.



Connections to...improve access to community resources



Connections to...increase safety for all users



Connections to...increase access to nature



# TRAILHEADS, ACCESS POINTS + INTERPRETIVE STOPS

A network of trailheads and trail stops is recommended for the Patroon Creek Greenway as a way to promote access, encourage greater use and highlight local cultural and natural history.

## Trailhead Hierarchy

Trailheads and trail stops provide the perfect opportunity for incorporating complementary elements into trail design. It is recommended that the Patroon Creek Greenway incorporate three different types of trailheads, as well as trail stops:

- **Major Trailheads:** Major trailheads should be located at each of the three preserves, which allows for one at each entry to the trail and one near the trail's midpoint.
- **Minor Trailheads:** Minor trailheads should occur at prominent locations along the trail that have the potential to draw a lot of attention to the trail and incorporate significant placemaking components.
- **Minimal Trailheads:** Minimal trailheads should occur at prominent locations along the trail that have the potential to draw a lot of attention to the trail but have minimal room for accommodating complementary trail components.
- **Interpretive Stops:** Interpretive stops should be located at places of interest along the trail that provide opportunities for exploring cultural and environmental themes. Depending upon the space available in these locations, they could be very simple with just interpretive signage or they could be larger and include additional components such as seating or art installations.

## Greenway Trail Components

Greenways are unique in that they promote sustainable means of travel and recreation while also incorporating elements of environmental access and protection. The many layers of cultural and environmental history that surround Patroon Creek make the Patroon Creek Greenway a perfect opportunity to tell those stories and connect both residents and visitors with the opportunity to appreciate and learn from their surroundings.

Residents identified the following components as components they would like to see incorporated into the Patroon Creek Greenway:

- Art Installations
- Artistic Lighting
- Bike Rental Facilities
- Bike Repair Stations
- Interpretive Signage
- Native Landscaping
- Playgrounds
- Restroom Facilities

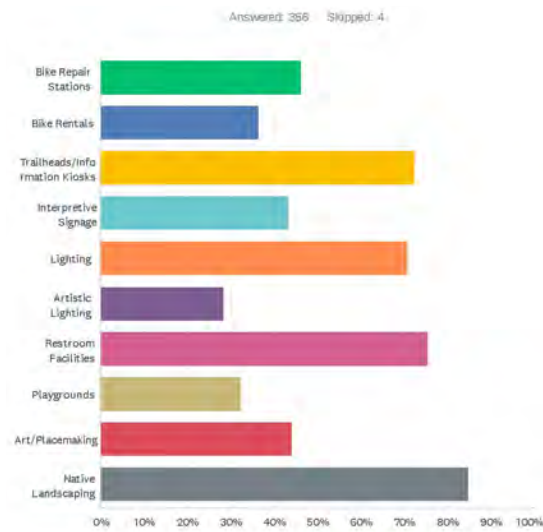
Native Landscaping, Art Installations and Playgrounds scored especially high among participants.

The majority of trail components should be located at trailheads and trail stops with the inclusion of basic components such as street trees, wayfinding and native plantings throughout the greenway.

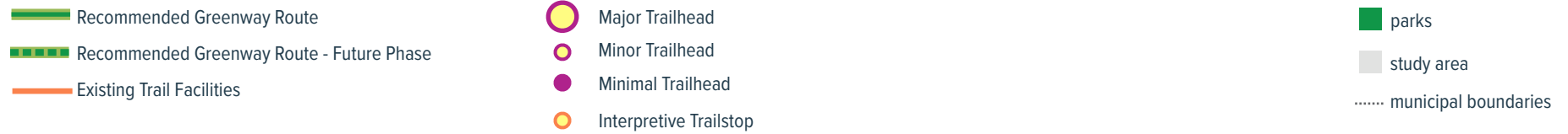


▲ **Patroon Creek Greenway Outreach Event.** An opportunity for the public to weigh in on preferred trail amenities for the Greenway.

Q9 What kind of amenities would you like to see along the Patroon Creek Greenway? Please select your top 5.



## SUGGESTED TRAILHEADS: HIERARCHY, LOCATIONS AND THEMES



- |  |   |
|--|---|
| 1 Albany Pine Bush Preserve / Six Mile Waterworks Park Trailhead | 5A Tivoli Lake Preserve and Farm Interpretive Trailstop |
| 1A Patroon Creek History Interpretive Trailstop                  | 5 East Tivoli Lake Preserve Trailhead                   |
| 2 Central Avenue Trailhead                                       | 6 Lark Park Trailhead                                   |
| 2A Native Vegetation Interpretive Trailstop                      | 7 Arbor Hill Elementary Trailhead                       |
| 2B Invasive Vegetation Interpretive Trailstop                    | 8 Manning Blvd/Livingston Ave Trailhead                 |
| 3 Watervliet Ave/Commerce Ave Trailhead                          | 9 Clinton Ave/Ten Broeck St Trailhead                   |
| 3A Engine 999 Interpretive Trailstop                             | 10 Albany Skyway Trailhead                              |
| 4A Charles Young Memorial Park Interpretive Trailstop            | 11 Corning Preserve Trailhead                           |
| 4 West Tivoli Lake Preserve Trailhead                            |   |



## TRAILHEADS, ACCESS POINTS + TRAIL ELEMENTS (CONT.)



▲ **Proposed Major Trailhead at Tivoli Lake Preserve at the N. Manning Boulevard Entry.** This rendering shows how several of the different trail components could be incorporated and used to create a sense of place and draw attention to the Greenway.



## MAJOR TRAILHEAD: TIVOLI LAKE PRESERVE AT THE MANNING BOULEVARD N ENTRY



- |  |  |   |
|--|--|---|
| 1 Patroon Creek Greenway                                   | 6 Brother Yusuf Burgess Trailhead with Interpretive Panels and Seating | 11 Landscaping to match Patroon Creek Daylighting   |
| 2 Patroon Creek Greenway Trailhead with Wayfinding Pillars | 7 Gravel Access Road   | 12 Patroon Creek Greenway Interpretive Area         |
| 3 Trailhead Parking  | 8 Relocated Livingstone Manor Access Drive Entry                       | 13 Bike Parking                                     |
| 4 Outdoor Classroom / Seating                              | 9 Patroon Creek Nature-Themed Playground                               | 14 Bike Share / Rental Station                      |
| 5 Educational Loop Trail                                   | 10 Tivoli Lake Preserve Interpretive Area                              | 15 Plant new trees along Greenway and at trailheads |



## TRAILHEADS, ACCESS POINTS + TRAIL ELEMENTS (CONT.)

### Major Trailheads

Major trailheads are intended to serve as important gateways to the greenway. They should draw attention to the greenway, provide desirable amenities that encourage and support use of the greenway and visually celebrate what the greenway has to offer.

Three major trailheads are proposed with one occurring at each of the three nature preserves touched by the Patroon Creek Greenway:

- **Albany Pine Bush / Six Mile Waterworks Trailhead:** This trailhead marks the westernmost point of the Patroon Creek Greenway and is located in the Albany Pine Bush and 6 Mile Waterworks Park.
- **Tivoli Lake Preserve Trailhead:** This trailhead is recommended at the easternmost entry to Tivoli Lake Preserve, located at the end of Manning Boulevard North.
- **Corning Preserve Trailhead:** This trailhead marks the easternmost point of the Patroon Creek Greenway and is located in the Corning Preserve on the banks of the Hudson River.

Major trailheads should be larger and have the potential to incorporate more of the desired trail components.

### Minor Trailheads

Minor trailheads are intended to bring awareness to the Patroon Creek Greenway while also serving as wayfinding and interpretive stops.

Six minor trailheads are proposed along the Patroon Creek Greenway to promote greater awareness and access from surrounding areas. Located in high profile areas, they are great opportunities for highlighting both the trail and connections to surrounding points of interest such as nearby institutions, parks and points of cultural interest. The type and number of complementary trail components should vary based on the context and amount of space available.

### Minimal Trailheads

Minimal trailheads are intended to bring awareness to the Patroon Creek Greenway in critical locations where visibility is high but space is limited.

Two minor trailheads are proposed along the Patroon Creek Greenway. Located in high profile areas, they are great opportunities for highlighting both the trail and connections to surrounding points of interest such as nearby institutions, parks and points of cultural interest.

### Interpretive Stops

Interpretive Stops will occur along the greenway in locations that may not be suited to serving as entry points, but offer a chance for users to either stop and rest or explore interpretive exhibits. They will also help in building the character of the Patroon Creek Greenway and making it not just a connector, but also a destination.

Six interpretive stops are proposed along the Patroon Creek Greenway and more can be added should further detailed study or community engagement recommend them. The type and number of complementary trail components should vary based on the context and amount of space available.

### Other Points Along the Greenway

There may be some points along the Greenway where signage is not warranted, but the simple addition of street trees, native plantings and/or art installations can supplement the identity and experience of the Patroon Creek Greenway.

## Recommended Placement of Trailhead and Trail Stop Elements

● Recommended    ● Optional

Locations	Number Proposed	Trail Branding and Signage	Interpretive Signage	Street / Trail Trees	Native Landscaping	Seating such as Benches or Boulders	Waste and Recycling Stations	Bike Parking	Bike Repair Stations	Bike Rental Facilities	Access to Vehicular Parking	Art Installations	Artistic Lighting	Playgrounds (space permitting)	Individual Elements of Play	Restroom Facilities (space permitting)
Major Trailheads	3	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Minor Trailheads	6	●	●	●	●	●	●	●	●	●	●	●	●		●	
Minimal Trailheads	2	●	●	●	●								●			
Interpretive Stops	4	●	●	●	●	●						●			●	
Points Along the Greenway	TBD			●	●							●				



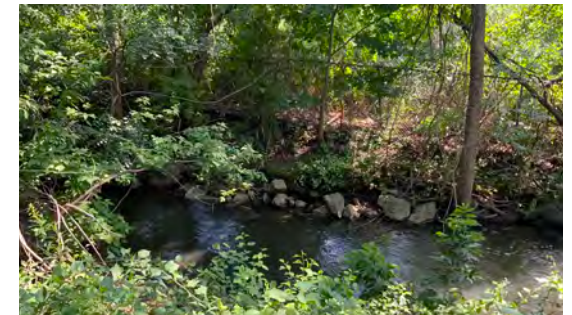
### ▲ Six Mile Waterworks Park

A major trailhead in 6-Mile Waterworks Park could be located near the parking area in the beautifully shaded pine grove.



### ▲ Tivoli Lake Preserve Entrance off Manning Blvd. North

A demonstration project was set up to illustrate the trail connection to the Tivoli Lake Preserve Trailhead.



### ▲ Patroon Creek

A trail stop along Patroon Creek could increase visual access to the creek while improving edge conditions.



# PLACEMAKING OPPORTUNITIES

Through its connection to historic Patroon Creek and three nature preserves, the Patroon Creek Greenway presents a tremendous opportunity to explore cultural and natural history while providing a peaceful place for recreation and inspiration and serving as an important transportation connection.

## Elements of Placemaking

Trail components can be used to make a greenway unique and specific to its own location and story. Patroon Creek Greenway components should draw inspiration not only from the environmental and cultural history of Patroon Creek, but also the Albany Pine Bush, Tivoli Lake Preserve, and Corning Preserve.

The following palette of materials draws on themes found at each of the three preserves and establishes a framework for developing the character of the Patroon Creek Greenway and allowing for it to vary in interesting ways along its length.

## TRAIL BRANDING

Given the rich and varied context of the Patroon Creek Greenway, trail branding will need to function in multiple ways:

- **Trail Recognition:** Branding will be needed to market the trail's existence and encourage widespread use. The regular incorporation of specific materials, including street trees; native plantings; amenities such as benches, waste and recycling receptacles, and bike racks; interpretive exhibits, and signage is an effective means of branding a trail.

- **Part of a Regional Trail Network:** The Greenway should be marketed as part of the larger regional and statewide network of trails to maximize its usefulness and appeal. More detailed recommendations for signage can be found in the following section on wayfinding.
- **Within the Context of Multiple Destinations:** As a trail that connects three preserves and shares an alignment with notable destinations like Clinton Market Square and the Albany Skyway, there will be competing needs for identification, wayfinding and placemaking in some locations and efforts will need to be collaborative so that these destinations and efforts can complement and strengthen one another in a cohesive and attractive way.

## SCULPTURAL TRAIL SIGNAGE

Incorporating larger, sculptural signage into the branding could help build trail recognition in a way that calls attention to trailheads that may not otherwise be immediately visible in their locations. The design for these totems or pillars could be flexible so as to allow for inclusion of other attractions such as the incorporated preserves or adjacent trails where appropriate.

## INTERPRETIVE SIGNAGE

Interpretive signage should match the interpretive signage used for the Patroon Creek Daylighting project. This signage can already be found along the Patroon Creek and recommended alignment and visually ties into themes of nature and sustainability.



▲ **Example of Sculptural Signage.** Image credit: Copyright N Chadwick and licensed for reuse under the Creative Commons License.



▲ **Existing Interpretive Signage for the Patroon Creek Daylighting project in Tivoli Preserve.**

## INTERPRETIVE AND EDUCATIONAL OPPORTUNITIES: POTENTIAL CULTURAL THEMES

### INTERPRETIVE AND EDUCATIONAL OPPORTUNITIES

Interpretive and educational content for the Patroon Creek Greenway should stem from its connection to Patroon Creek and the three preserves that it connects. Themes should seek to:

- Explore **Cultural History**
- Study the **Environmental Context** of the trail
- Encourage **Sustainable Practices**

### TRAILHEAD AND WAYFINDING SIGNAGE

Trailhead and wayfinding signage should follow the recommendations as set forth in the following section on Wayfinding.

### Regional and Local Connections

Interpretive, educational and wayfinding content for the Patroon Creek Greenway should tell the story of Patroon Creek in a way that connects it to the surrounding context and relevant nearby destinations. Cross-promotional content will increase support for the Greenway while also adding interest to the experience. In addition to the Albany Pine Bush Preserve, the Tivoli Lake Preserve and Farm, and the Corning Preserve, the trail is within easy walking or riding distance of many other attractions including the Albany Skyway, SUNY Albany, the Ten Broeck Mansion, the Underground Railroad Education Center, multiple historic theaters, and many other attractions.

#### /// Native American Heritage

#### /// Early European Settlement around Patroon Creek

#### /// Industrial History of Patroon Creek

#### /// Surrounding Neighborhood History

#### /// Cultural History of the Three Preserves

#### /// Underground Railroad

#### /// Railroad and Locomotive History



▲ **Early Railroad History.** The Mohawk & Hudson Railroad was one of the first railroads in the United States and many of the earliest train engines were built in the Capital Region. The Tivoli Hollow Line was established along Patroon Creek in 1844 and the railroad continues to operate in the same general area. Image Credit: Howard C. Ohlhaus, June 25, 2010.



▲ **Educational Tour of the nearby Underground Railroad Education Center.** Image credit: Underground Railroad Education Center



▲ **Prescribed burns at the Albany Pine Bush.** Humans have historically occupied the Albany Pine Bush for over 6,000 years. Native Americans used prescribed fires to maintain the landscape as a place for hunting game and collecting wild edibles. The Albany Pine Bush Preserve Commission continues this practice today. Image Credit: Albany Pine Bush.



## PLACEMAKING OPPORTUNITIES (CONT.)

### INTERPRETIVE AND EDUCATIONAL OPPORTUNITIES: ENVIRONMENTAL THEMES

/// Environmental History of the Patroon Creek

/// Ecosystems Found Along the Patroon Creek

/// Native Vegetation, Species Diversity, and Wildlife Habitat

/// Importance of the Urban Canopy

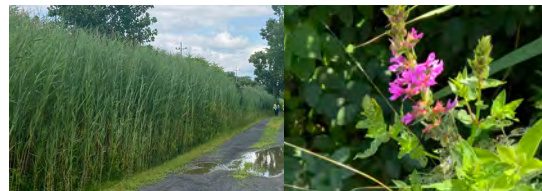
/// Invasive Species and the Threats They Pose



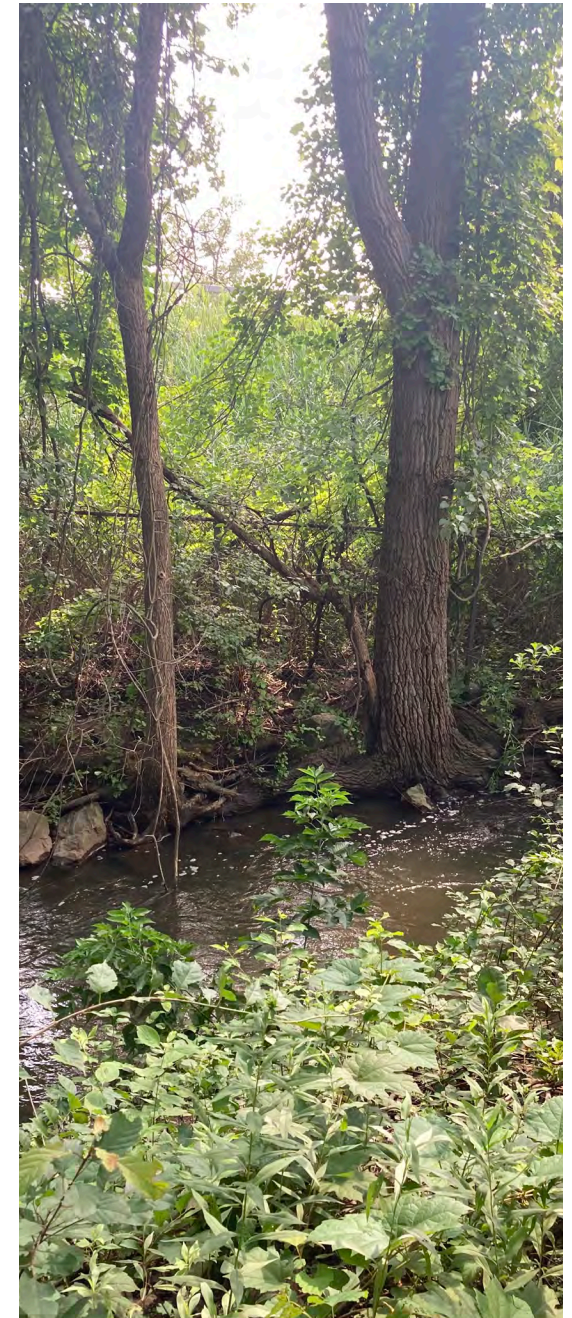
▲ **Educational Tour along Patroon Creek at Tivoli Lake Preserve.** Image credit: Friends of Tivoli Lake Preserve and Farm



▲ **Ecosystems Along Patroon Creek**  
The proposed alignment for the Patroon Creek Greenway provides access to a variety of different ecosystems.



▲ **Invasive Species**  
The Patroon Creek Greenway offers many opportunities to educate users about the negative impacts invasive species have on the environment, human health, and the economy; as well as the importance of preventative measures.



▲ **Patroon Creek**



## MATERIALS PALETTE: NATURAL, THEMATIC + SUSTAINABLE MATERIALS

### Materials

A palette of materials that relates to Patroon Creek and the three preserves that it connects should be incorporated into the structure of the greenway as a way of branding and distinguishing the trail.

### Native Landscapes

One of the strengths of the Patroon Creek Greenway is the opportunity to draw upon the many different ecosystems encompassed within the trail. Trailheads and trail stops should incorporate native vegetation as a way to create a better sense of place, educate users about the benefits of these systems and the importance of protecting them,



#### ▲ Native Plants and Patroon Creek Daylighting.

The Patroon Creek Daylighting project incorporates many native and pollinator-friendly plants that could be used as placemaking tools along the Patroon Creek Greenway.

### /// Natural and Environmentally-Themed Materials



### /// Industrial Materials



### /// Sustainable Materials





## PLACEMAKING OPPORTUNITIES (CONT.)

### Street / Trail Trees

Trees can enhance the Greenway through their ability to visually define the trail, provide vertical barriers that separate pedestrians and cyclists from vehicular traffic, and provide shade for trail users. For already vegetated areas, trees should be selected to complement the ecosystem that surrounds the trail. In more developed, urban areas, street trees should be included wherever possible. In any areas adjacent to the Albany County Patroon Creek Trunk Sewer easement, large trees with significant root structures should be avoided to minimize impacts to sewer infrastructure.

To maximize their effectiveness, tall shade trees should be planted whenever there are no vertical conflicts. Low, flowering trees should be planted under utility lines. Low maintenance, disease and pest resistant fruit trees should be considered in appropriate locations where trail users and residents could potentially harvest fruit. There may be opportunities for maintenance partnerships with local not-for-profits and community organizations and educational institutions. Additional recommendations for trees can be found in the following section on Native Landscapes.

### Bike Parking

Bike parking should be included at major and minor trailheads and should either use materials from the recommended materials palette or be thematic in nature. All bike racks should be sturdy, well-anchored, and enable locking of the bike frame and at least one wheel with a U-lock.

### Bike Repair Stations

Bike repair stations should be located at all major trailheads as well as those minor trailheads where space permits and the stations could benefit nearby residents.

### Seating

Three different types of seating are recommended for the Patroon Creek Greenway:

- **Trail and Trailhead Benches:** A single model of benches that uses either sustainably harvested wood or recycled plastic designed to look muted and natural should be used to provide seating at trailheads, interpretive stops and along the greenway. A simple, open model that places emphasis on the surroundings as opposed to the bench itself is recommended. A combination of backed and backless benches can be used to provide a variety of seating that best suits the users and the context.
- **Boulders:** Drawing from the materials used along the daylighted portion of Patroon Creek, boulders can be used to supplement seating options at trailheads, interpretive stops and along the greenway.
- **Sculptural Theme-related Seating** can be used at trailheads and interpretive areas where seating may also serve as a focal point and add to the character of the greenway.

## THEMATIC SELECTIONS: SEATING AND BIKE RACKS

### /// Sustainable Materials



credit: Kay Park

### /// Natural Materials

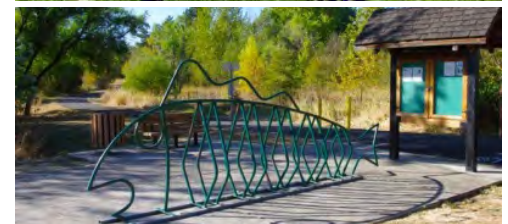


credit: Streetlife

### /// Theme-Related / Sculptural



credit: Phoenix Creative Metal Art



## Waste and Recycle Stations

Combined waste and recycling bins with clear graphics and different size and shape holes tend to be more effective in keeping trash out recycling bins. Waste and recycle stations should be located at trailheads wherever possible.

## Art Installations

Art installations can greatly enhance the recognition and appeal of trail systems. They have the ability to:

- Draw attention to the trail
- Strengthen thematic narratives
- Include local artists in the process and build neighborhood ownership
- Add beauty and interest to the trail in a way that makes it unique and specific to the place

## Artistic Lighting

Artistic lighting could be used at major trailheads and some of the minor trailheads to highlight art elements and vegetation as a way to increase safety and draw further attention to the presence of the Patroon Creek Greenway. All lighting should be dark-sky compliant.

## Restroom Facilities

Since restrooms are recommended primarily at major trailhead locations, they may already be provided nearby. If new restrooms are considered and there is maintenance capacity, environmentally sustainable features such as solar panels and composting toilets should be considered.



### ▲ Combined Waste and Recycling Stations

Combined waste and recycling bins with clear graphics and different size and shape holes tend to be more effective in keeping trash out recycling bins. Image Credit: Waste Wise Products.



### ▲ Bike Repair Station

Bike repair stations would benefit both greenway users and nearby residents. Image Credit: Bike Dock Solutions.



### ▲ Kinetic Monarch Sculpture

Image Credit: Addison Arbor Foundation



### ▲ Student Art from Arbor Hill Elementary School makes this sign meaningful and unique.



## PLACEMAKING OPPORTUNITIES (CONT.)

### Playgrounds

Playgrounds could be located at or near major trailheads and should be designed to help tell the story of Patroon Creek.

### Individual Elements of Play

Individual elements of play could be incorporated at minor trailheads and interpretive stops where space may be more limited. Studies have shown that placing a series of play elements along a trail can increase use from families and children and promote healthy and regular exercise.

### PATHS FOR PLAY

Studies show that creating networks of play along path and trail systems encourages active lifestyles in children, families and communities.

- Integrating play into walkable, bikeable, trail systems can increase use and make greenways more desirable as regular destinations.
- Including nature-themed elements of play along the greenway can increase engagement with nature and environmental literacy.



▲ **Susquehanna River Themed Playground at Southern Tier New York Welcome Center.** Image Credit: I♥NY



▲ **Public Restroom on the Johnson Creek Trail in Austin, TX.** Image Credit: Sabre Commercial / The Trail Foundation



▲ **Giant Cattails evoke nature and create a sense of play at Walker Mill Regional Park.** Image Credit: cre8play



▲ **Prefabricated Unit with Solar Power and Composting Toilet.** Image Credit: Clivus Multrum Inc.



▲ **Nature-inspired Play Elements.** Image Credit: Playscape Creations





▲ Rendering of the proposed minor trailhead at Lark / Arbor Hill Park incorporating several of the placemaking amenities described in this section.

## CHAPTER 6: RECOMMENDATIONS

# WAYFINDING

To be recognizable and effective, the Patroon Creek Greenway will need to strike a balance of being recognizable as both an entity unto itself and also part of a larger regional system of trails and connections as well as series of popular destinations.

### Trailhead and Wayfinding Signage

Signage is a crucial component for marking the presence of a trail so that those in the area are aware of its presence and those using it are able to follow it easily. For this project, several types of signage are recommended:

- **Sculptural Pillars:** Larger, sculptural signage should be incorporated to create a sense of place, increase the visibility of trailheads, and support the branding of the trail system.
- **Major and Minor Trailhead Signs:** Trailhead signs should be located at trail heads and should contain a trail map and trail network map that alerts users to other nearby trails and attractions.
- **Minimal Trailhead Signs:** Minimal trailhead signs should be located at trail heads where space is limited and the larger map sign cannot be accommodated.
- **Pole Banners:** Where possible, pole banners should be used in high traffic areas where the trails may overlap with roads or sidewalks.
- **Directional Signage:** Directional signage with distance information and connections to other trails and nearby attractions should be included.

- **Trail Markers:** Trail markers should be placed on trees or posts throughout greenway.
- **Parking Signs:** Parking signs should be incorporated in locations where trailhead parking exists.

When appropriate, Patroon Creek Greenway signage should include the Capital Trails NY branding so that it ties into and is easily recognizable as part of the Capital Region trails network.



### Patroon Creek Greenway Logo

A logo that captures the spirit of the Patroon Creek Greenway should be incorporated into the trail wayfinding and signage. Utilizing a graphic logo will immediately convey to viewers something about the experience they can expect on the greenway and will thereby increase interest and awareness.

The logo should be graphically strong and flexible so that it can be modified to suit the different signage needs.



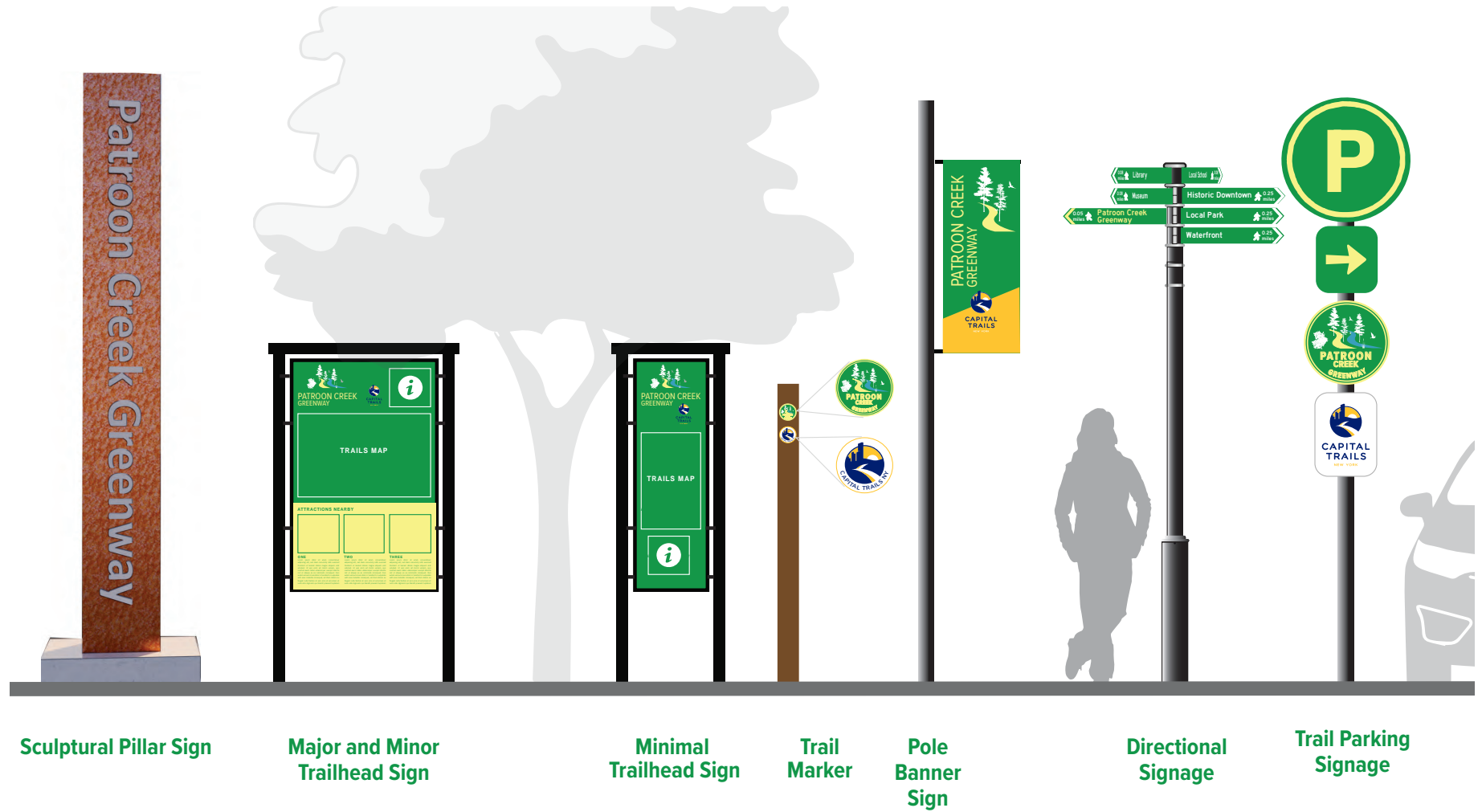
### CAPITAL TRAILS NEW YORK

Capital Trails New York is a regional network of trails serving and connecting the four Capital District counties of Albany, Rensselaer, Saratoga and Schenectady.

In 2007, the Capital District Transportation Committee (CDTC), released “Tech Valley Trails: A Greenway Concept for the Capital District,” a regional plan for a system of trails and greenways that together create a connected regional network of trails. Much like the Empire State Trail, the goal of the concept is to provide an opportunity for the Capital Region’s different communities to work together on an achievable common vision that provides a safe space for walking and bicycling, protects the environment, improves quality of life, conserves energy, and promotes tourism and economic development.

While there are many individual trails with their own unique identity that make up the regional network, the goal of incorporating the Capital Trails NY branding will provide a cohesive look for all trails while promoting greater awareness and use of both the network and individual trails.

## PATROON CREEK GREENWAY WAYFINDING SIGNAGE PALETTE



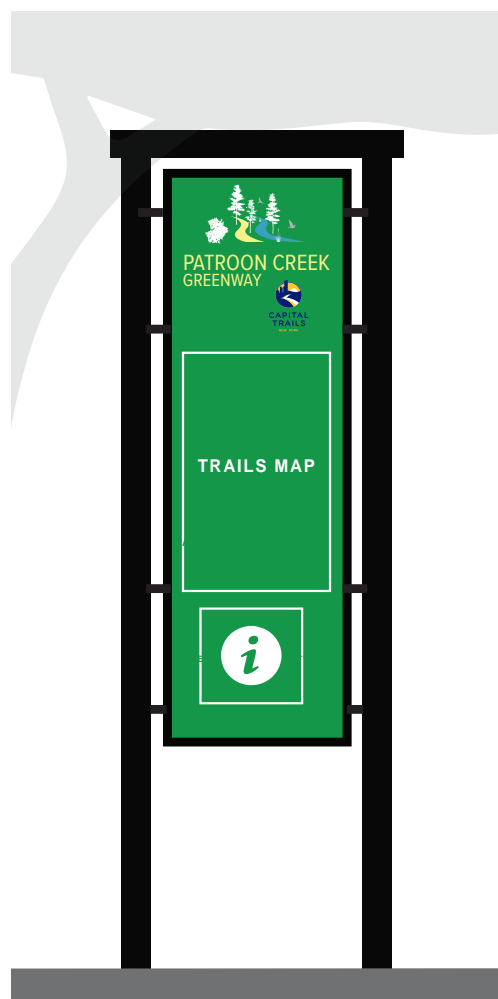


# CHAPTER 6: RECOMMENDATIONS

## WAYFINDING (CONT.)



► Major and Minor Trailhead Sign



► Minimal Trailhead Sign



► Pole Banner Sign



▲ Proposed Patroon Creek Greenway Minor Trailhead at Central Avenue



## NATIVE LANDSCAPES

As a greenway intended to incorporate elements of environmental access and protection, the Patroon Creek Greenway offers an opportunity to explore and enhance a range of ecosystems, as well as an opportunity to educate users about the threats of invasive species and the need to promote native landscapes.

### Defining the Greenway Through Vegetation

Incorporating a range of trees, grasses and pollinator plants at trailheads, interpretive stops and appropriate locations along the Patroon Creek Greenway will help brand the trail system, provide opportunities for environmental education, and strengthen local ecosystems.

The New York State Department of Environmental Conservation (NYSDEC) provides many resources and recommendations for native plants on their website, which should be used as a resource for identifying plants that could and should be incorporated into the Patroon Creek Greenway landscapes. The Albany Pine Bush, Five Rivers Environmental Center, and the Albany County Cornell Cooperative Extension are also excellent resources.

### THE IMPORTANCE OF THE URBAN TREE CANOPY

Urban Tree Canopy refers to the area of leaves or tree needles that covers the ground in an urban area. Studies have shown that improving a city's urban tree canopy can have numerous benefits, including reducing summer peak temperatures and air pollution, cutting air conditioning and heating costs, improving mental health, providing wildlife habitat, providing aesthetic benefits, reducing crime levels, improving social ties among neighbors, and reducing negative stormwater impacts.

### The VALUE of TREES



Image Credit: Pennsylvania Parks and Forest Foundation





▲ Rendering of the proposed trail and interpretive stop where it passes through the Albany Pine Bush at 6-Mile Waterworks Park



## NATIVE LANDSCAPES (CONT.)

### Existing Native Ecosystems

Through its connection to Patroon Creek, the Albany Pine Bush Preserve, Tivoli Lake Preserve and Farm, and the Corning Preserve, the Patroon Creek Greenway touches many different ecosystems, including:

- Pine Bush
- Patroon Creek riparian system
- Stormwater retention lakes and ponds
- Meadows located under utility line easements
- Upland forests
- Urban ecologies
- Hudson Riverfront

As design of the Greenway advances, proposed landscaping should reflect and complement these native landscapes where possible.

### Thematic Display Gardens

In addition to highlighting native ecosystems, the Patroon Creek Greenway could host a series of thematic display gardens that could provide users with ideas and resources for how they can apply sustainability in their own community.

- Rain Gardens
- Pollinator Gardens
- Edible Gardens
- Bird Gardens
- Native Plant Gardens

### Invasive Species Education

Invasive species out-compete native plants and animals and devastate natural systems that are critical to the health of the ecosystems that the planet depends upon for survival. It is estimated that the harm caused by invasive species in the United States totals over \$100 billion per year.

Patroon Creek and the three preserves that the Patroon Creek Greenway connects all face threats from multiple types of invasive species:

- Edge Condition Invasives
- Threats to Forested Areas
- Wetland Invasives
- Open Waters Invasives

The Albany Pine Bush and the Friends of Tivoli Lake Preserve and Farm both incorporate invasive species education into their educational programming and the Patroon Creek Greenway should build on this important educational opportunity. Educating users to recognize commonly found species could raise awareness and support for combating invasive species.



▲ Busch Garden Greenway Rain Garden  
Image Credit: Great Rivers Greenway.



▲ Sheep are used to help control invasive species at Tivoli Lake Preserve and Farm  
Image Credit: Friends of Tivoli Lake Preserve and Farm.





### **Patroon Creek Daylighting and Restoration**

The Patroon Creek Daylighting project restores native habitat in and along the segment of the creek that was daylighted and provides interpretive signage along the adjacent trail that would be integrated into the Patroon Creek Greenway.



# NATIVE LANDSCAPES (CONT.)

## NATIVE PLANT PALETTE: ICONIC PLANTS FOR TRAIL RECOGNITION

Below is a sampling of native trees, grasses and perennials that could be incorporated along the Patroon Creek Greenway. Richly textured and colorful plants will build a sense of place and draw attention to the trail. Where openness and visibility are a concern, consideration should be given to using dwarf cultivars of some species.



### TREES



**Pitch Pine**  
*Pinus rigida*



**Shingle Oak**  
*Quercus imbricaria*



**Serviceberry**  
*Amelanchier spp.*



**Birch Species**  
*Betula spp.*



### SHRUBS



**Chokecherry**  
*Aronia spp.*



**Currant and  
Gooseberry Shrubs**  
*Ribes spp.*



**New Jersey Tea**  
*Ceanothus americanus*



### GRASSES



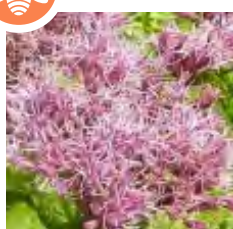
**Little Bluestem**  
*Schizachyrium scoparium*



**Bottlebrush Grass**  
*Elymus hystrix*



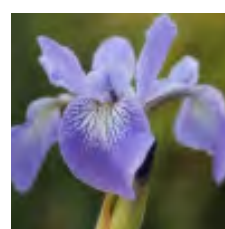
### POLLINATOR PLANTS



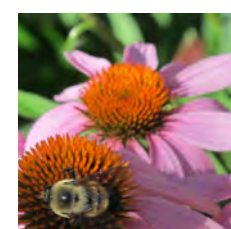
**Joe Pye Weed**  
*Eutrochium spp.*



**Common Milkweed**  
*Asclepias incarnata*



**Northern Blue Flag**  
*Iris versicolor*



**Purple Coneflower**  
*Echinacea purpurea*



**Black-Eyed Susan**  
*Rudbeckia spp.*

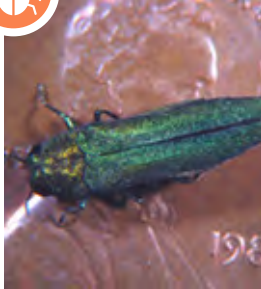
Image Credits: Albany Pine Bush, NYSDEC, Cornell University, Cornell Cooperative Extension

## INVASIVE SPECIES: COMMON THREATS IN NEW YORK STATE

Below is a sampling of invasive species that threaten New York ecosystems.



### INSECT INVASIVES



**Emerald Ash Borer**



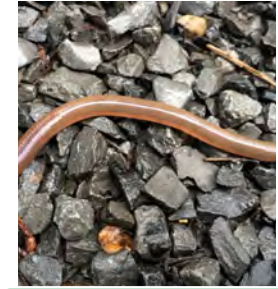
**Asian Longhorn Beetle Botanical**



**Hemlock Woolly Adelgid**



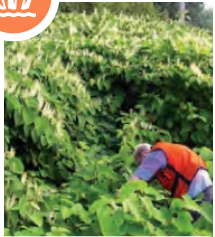
**Spongy Moth**  
(formerly Gypsy Moth)



**Jumping Worms**



### WETLAND INVASIVES



**Japanese Knotweed**  
*Polygonum cuspidatum*



**Giant Reed**  
*Phragmites australis*



**Purple Loosestrife**  
*Lythrum salicaria*



**Giant Hogweed**  
*Heracleum mantegazzianum*



### FOREST INVASIVES



**Oriental Bittersweet**  
*Celastrus orbiculatus*



**Kudzu**  
*Pueraria montana*



**Multiflora Rose**  
*Rosa multiflora*



### WATER INVASIVES



**Water Chestnut** *Trapa natans*



**Water Thyme**  
*Hydrilla verticillata*



**Zebra Mussels**



### DISEASES



**Oak Wilt**



**Beech Leaf Disease**

Image Credits: Howard Russell (MI State U, [www.forestryimages.org](http://www.forestryimages.org)); NYSDEC; CT Agriculture Experiment Station, Bugwood.org; Invasive Species Centre; Amy Benson (USGS); Karla Salp (Washington State Dept. of Agriculture, Bugwood.org); Division of Lands and Forests' Forest Health Imaging Lab