Rensselaer County Trail from the Livingston Avenue Bridge to the Troy-Menands Bridge

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Submitted To:
Hudson River Greenway

Submitted By:
ELAN
Saratoga Springs, NY
AND
The Hudson Group, LLC
Albany, NY
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Background & Involved Agencies

Hudson River Valley Greenway
Recognizing the importance of the 13 counties and 259 communities that make up the Hudson River Valley, New York State created the Hudson River Valley Greenway (Greenway) in 1991 and the United States Congress designated the area a National Heritage Area in 1996. The Greenway enabling legislation calls for the development of an interconnected “Greenway Trail” from Battery Park in the Village of Waterford, in southern Saratoga County, and Schaghticoke in northern Rensselaer County, to The Battery at the southern tip of Manhattan in New York City.

In addition to the “Greenway Trail” there is National Heritage Area enabling legislation that specifies the creation of an interconnected network of recreational and heritage trails in the Hudson River Valley.

Finally, with the support of a $1 million grant from Governor Pataki, the Greenway and the Hudson River Watertrail Association are involved in developing the Hudson River Greenway Water Trail from Albany to Manhattan. The goal of all programs is to tie together the diverse resources and communities of the Hudson River Valley.

Over the last two years, the Hudson River Greenway via the Greenway Trail Steering Committee, with direct input and assistance from state, county, local entities, conducted research and public outreach in an effort to prepare a Greenway Trail Vision Plan. Although still in draft form, the plan provides a framework and “working plan” for completion of a diverse system of trails from the Capital District to New York City.

The Greenway Trail System
As stated, the Hudson River Valley Greenway Trail System is a combination of various trail types, creating a unique network of multi-use land and water trails that enables inviting connections between key community destinations, such as Hudson River waterfront access points, city or village main streets, open spaces, residential areas, historic sites, recreation destinations and the surrounding countryside. Trails can be waterfront esplanades, bike paths, sidewalks and pedestrian boulevards, simple woods paths, or the river itself.

Specifically, these trail types include; 1) the Greenway Trail, a land based trail, which is the primary focus of the Vision Plan, 2) the Hudson River Greenway Water Trail, and 3) Bike Route 9. The Greenway strives to make connections between these different trail types whenever feasible, providing community members and visitors to the Hudson River Valley opportunities to explore all of the natural, cultural, and historic resources the region has to offer.
**Greenway Trail Categories**

In order to reflect the diversity of resources in the Hudson River Valley, portions of the Greenway Trail may be designated as one of three primary trail categories. The Greenway Trail categories are as follows:

1. **Riverside Trails** – Routes along or near both shores of the Hudson River that view the Hudson River shoreline providing access to the river; or that run along the ridge lines with views of the river. The routes will directly connect riverside open spaces, river access sites, historic sites and scenic downtowns, as well as link community trail systems.

2. **Countryside Corridors** – A network of rail trails, utility easement lines and shared roadways that connect the countryside communities in the Greenway area to the river front corridors.

3. **Connector Trails** – The Greenway recognizes that many communities have trail resources that do not fit easily into the above categories, but are important connections between the Riverside Trails and Countryside Corridors. Since the Greenway's primary goal is to make connections between resources, communities and the Hudson River, trails that provide these connections are included in the Greenway Trail system.

**Additional Trail Types**

- **Hudson River Greenway Water Trail** – A 156-mile recreational small boating route from the Erie Canal to the New York Harbor comprised of launching areas, access points, campsites and other amenities at least every 10 miles, on both sides of the river.

- **Bike Route 9** – A bike route following US and NY routes 9W, 9D, 9, 9J and other roads and occasionally detouring to local roads, including US 4 and NY 32 in Rensselaer and Saratoga counties. The New York State Department of Transportation (DOT) and the Greenway designated scenic bike trails where they exist as well as Bike Route 9 as part of the Greenway Trail System.

**Capital District Transportation Committee**

The Capital District Transportation Committee (CDTC) is the designated Metropolitan Planning Organization (MPO) for the Albany-Schenectady-Troy metropolitan area. CDTC has its origins in the former Capital District Transportation Study (CDTS), set up in 1965 through agreements between New York State and the four Capital District counties (Albany, Rensselaer, Saratoga, and Schenectady) and the 78 municipalities in those counties. While its initial mission was to develop a long-range transportation plan for the area, CDTC’s current efforts are much broader.

In addition to the Greenway's efforts, the CDTC has focused on the importance of establishing a desirable and safe network of bicycle and pedestrian routes throughout the region. CDTC’s New Visions plan and advisory committees indicate strong public support for this initiative.
To assist in accomplishing the goal of a regional trail system, CDTC has established a Bicycle and Pedestrian Committee. The Bicycle and Pedestrian Issues Task Force, (Bike/Ped Task Force) was established as part of the original New Visions process and has remained a very active committee that meets monthly to discuss bicycle and pedestrian issues in the Capital District. The Task Force deals with issues ranging from public education to facility planning. The members provide technical guidance on Community and Transportation Linkage Program projects and other bicycle and pedestrian related projects throughout the region. Task Force members also provide guidance and recommendations to CDTC’s Planning Committee.

The organizations that are actively represented on the Task Force include: NYS Department of Transportation, NYS Department of Health, Albany County Department of Economic Development, Conservation and Planning, Rensselaer County, Schenectady County, Town of Colonie, Village of Menands, Guilderland Pathways Committee, Parks & Trails NY, Saratoga County Heritage Trails Committee, CDTA, Hudson River Valley Greenway, the New York Bicycling Coalition and the Mohawk Hudson Cycling Club among others.

Study Purpose

This study was funded through CDTC’s Community and Transportation Linkage Planning Program. The purpose of initiating this study was to implement a section of the Greenway Trail Visions Plan that suggests developing a trail system in a critical gap area between the Cities of Rensselaer and Troy. When constructed, this trail will link with the other trails currently built or planned along the Hudson River shoreline in Rensselaer County. The feasibility study focused on opportunities and constraints for creating a pedestrian trail from the Livingston Avenue Bridge, in the City of Rensselaer, to the Menands Bridge, in the City of Troy. The linear distance between the two bridges is approximately 4 miles. The study also identifies how this potential trail will ultimately link to other trails along the Hudson River shoreline.

The section of trail between the Livingston Avenue Bridge and the Troy-Menands Bridge in Rensselaer County can serve an important link in the overall Greenway’s Trail System. In addition to serving town residents, the trail will provide bicycle and pedestrian access to nodes of activity throughout Rensselaer County such as Hudson Valley Community College. With a college enrollment of 10,000+ students, the majority of which are from the Capital District, parking is near capacity and road congestion is increasing. Providing an alternative means of access can help alleviate the situation as the college continues to grow in interest and importance. In addition to improving the north/south access and linkages to local trail systems, the trail will eventually link to the Corning Preserve and the Mohawk-Hudson bike hike trail on the western shore of the Hudson River adjacent to I-787 providing direct access to the City of Albany and surrounding communities.

In preparing this report, a steering committee was appointed to oversee the study and provide input. The committee consisted of representatives from the City of Rensselaer, City of Troy, Town of North Greenbush, RPI Tech Park, Rensselaer County Planning Office, Rensselaer County Sewage Treatment

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Facility, CDTC, and the Greenway. Monthly meetings were held to review the proposed draft and field observations were conducted to gain a better understanding of the study area. In addition to these meetings, two public information sessions were held at the Bloomingrove Reformed Church in North Greenbush.

**Issues and Opportunities – A ‘Virtual Tour’**

Following is a summary of the study area beginning from the north end at the Troy-Menands Bridge and working south toward the Livingston Avenue Bridge. Information collected during the inventory stage of this study was used to identify issues and opportunities as they dictate trail design. The following section discusses the details of the trail design. The series of maps in Appendix A illustrate the study area. For ease of reference, mile markers are noted on the map and correspond to the text below.

**Northern Trail Access Point (Mile 0.0 to 0.5):** Beginning at mile 0.0, the northern project study limit is at Water Street in Troy which provides access to the shoreline from the City of Troy’s street network, NYS Rt. 378, and the Troy-Menands Bridge. Winding turns and a drop in elevation create limited site lines as one travels on Water Street toward the Hudson River. Given these conditions, it is difficult for vehicles to see pedestrians along the shoulder of the road.

At mile 0.5 a long-term access opportunities exist through the King Fuel’s site which has recently undergone a planning effort (1999) examining redevelopment of the South Troy Waterfront including a trail system. The abandoned train trestle crossing over Water Street near the shoreline provides another opportunity to connect to the City of Troy street network and to access the Troy-Menands Bridge. The details of these options are discussed in the proposed alignment of the trail.

Photographs on the next page illustrate the issues and opportunities within this portion of the study area.
Northern Trail Access Point Images (Mile 0.5):

Water Street looking away from the river with a sharp left hand turn in the road.

Water Street looking away from the river with a trestle overhead.

Water Street looking toward the river with a trestle overhead.

View of river from top of trestle.
Water Street from King Fuel to the Rensselaer County Sewage Treatment Plan (Mile 0.5 to 1.6): This section of Water Street directly parallels the Hudson River and offers fine views of the Corning Preserve Trail on the west side of the river, the Village of Menands, and the City of Albany skyline. This section of the trail will also link into the City of Troy street and sidewalk system as discussed in the ‘Trail Linkages’ section of the report.

From mile 0.5 to mile 1.0 Water Street parallels a site formerly owned by Chevron. The site has been abandoned and, for security reasons, a chain link fence with barbed wire has been installed. Removing or changing this fence to a more aesthetically pleasing fence style would greatly enhance this segment of the trail.

From mile 1.0 to mile 1.5 an environmental remediation project is underway. At one point this site was used by a manufactured gas plant for waste disposal and shoreline fill. Hydrocarbon wastes and a variety of other material including slag is being excavated and removed from the site for treatment. The project is under the Environmental Protection Agency’s order and is being supervised by the NYS Department of Environmental Conservation. The property is owned by National Grid (formerly Niagara Mohawk Power Corporation) who is participating in the clean-up effort.

Given the final configuration of the remediation site, opportunities for trail alignment in this section of the study area are generally limited to the roadway due to the narrowness and steepness of the clean-up site. Early coordination efforts with NYSDEC are underway to assist in the trail design along Water Street. Refer to Appendix B for correspondence between the Greenway and NYSDEC regarding requests to accommodate the trail.

From mile 1.3 to mile 1.6 Water Street is very narrow with a steep embankment toward the river on the west side of the road and the railroad right-of-way along the east side of the road. The general narrowness of this section of Water Street poses difficulties in accommodating the trail along the shoulder of the road. Also at this point, if a safe and legal railroad crossing can be obtained, the riverside trail can link to the RPI Tech Park trail system, Hudson Valley Community College, the NYS Armory and other areas within the Town of North Greenbush.

Landownership in the from Water Street at mile 0.0 to the Rensselaer County Sewage Treatment Plant at mile 1.6 is a mixture of property owners including Portec Rail, King Fuel, the City of Troy, National Grid, Rensselaer County, and the Rensselaer Polytechnic Institute Technology Park (RPI Tech Park). Refer to Appendix C for a map of property ownership.
EPA Clean-Up Site Images (Mile 1.3):

- Clean-Up Site looking north
- River Road with clean-up site in distance and railroad track
- River Road looking south toward the Rensselaer County Sewage Treatment Plant
- River Road looking north with truck traffic
Rensselaer County Sewage Treatment Plant (STP) (Mile 1.6 to 2.0): The facility along the river provides an excellent opportunity to bring the trail directly along the shoreline virtually unimpeded. As one enters the STP lands at mile 1.6, there is a transition zone from River Road to the river’s edge. Consideration for handicapped access along this slightly steep area will have to be made as the trail is designed. Once at the river’s edge, there is a graded ‘shelf’ paralleling the river providing a natural location for the trail. Upon meeting with Rensselaer County officials, they are willing to allow for the trail to be located in this area but will require a security fence between the trail and the STP facility with gates for worker access to the trail and the river’s edge. Another consideration to incorporate into the trail design is winter ice flows from the Hudson River as ice can severely damage permanent structures. Further, it is desirable to locate the trail in front of the STP rather than behind the facility where the lands are used for bio sludge disposal which causes disagreeable smells.

It was noted that bald eagles have been seen in this area which would provide a positive feature to the trail.

**Sewage Treatment Plan Images**

![Looking north into the transition zone leading into the STP](image1)

![Looking north at the ‘shelf’ along the river with the STP facilities on the right (east).](image2)

![Looking south at the exit area from the STP](image3)

![Ice flows at the STP](image4)
Natural Area from the STP to the Patroon Island Bridge (I-90) (Mile 2.0 to 3.4): The lands just south of the STP are largely undisturbed and present opportunities to experience a natural area including tidal wetlands. Upon leaving the STP lands at mile 2.0, the trail route crosses property owned by National Grid (formerly Niagara Mohawk Power Corporation) then onto a parcel of land owned by the Town of North Greenbush at mile 2.1 (see Appendix C for a map of property ownership.) Though there is not immediate access to the Town’s property via a public roadway in the Town of North Greenbush, once the trail is developed, the Town is considering using these lands as a waterfront park for its residents.

Continuing south from mile 2.2 to 3.4, an existing gravel road leads through lands that are owned by the RPI Tech Park. In the late 1980s, RPI prepared a master plan for all of their lands between US Rt. 4 in North Greenbush and the Hudson River. Future concept plans for the lands along the river include a waterfront convention center, inland marina, and additional office buildings. During the preparation of this study, meetings were held with the RPI Tech Park director who was favorable to allowing the trail to pass through their lands. However, when the future planned development take place, it must be recognized that the trail may be relocated to accommodate RPI Tech Park plans.

Two tidal wetlands at mile 2.5 are located in this area with one outlet to the river. While not deep or large enough to allow boating, these wetlands can provide an opportunity to experience nature through wildlife viewing, wildlife photography, picnicking and other similar activities. At the outlet to the Hudson River, there may be an opportunity to allow for a landing for paddlers along the Hudson River though there are some impediments that should be brought into consideration.

Timber structures were built long before other streamside modifications were made. Over the years, the stream outlet deposited rock fill and gravel which created a small alluvial dam that, at low tide, forms a small landing site along wooden stavings for canoeists and kayakers. This small ‘landing area’ is free of river flow at low tides so that current will not pose a problem. At higher tide, paddling directly into the stream also makes an easy landing practical at this location.

Inland of the old wooden staves, the stream is a minimum of one foot deep with gravel, sand and compact mud sand bars along either side of the stream forming a suitable landing site. At high tide, a small dock would be helpful and could accommodate fishing. A more in depth report of field investigation into this area can be found in Appendix D.

From mile 2.5 to 3.4, there is a clearing with existing gravel trails that are frequented by ATVs. At this point, the trail could continue to be located along the river rather than along the existing unimproved gravel road.
Natural Area Images

Stream outlet from tidal wetland

Existing culverts providing stream crossing

Tidal pond

Existing shoreline condition

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South of Patroon Island Bridge (I-90) (Mile 3.4 to 4.0): Along this area, the lands are heavily wooded so some clearing will have to occur to locate the trail at the river’s edge. At low tide most of this section has a firm gravel beach behind and in front of the old wooden seawall making a pleasant walk for the low tide hours of the day. There is a berm that begins approximately 400’ south of the I-90 bridge and is approximately 45’ inland of the wooden seawall remnants. It is comprised of suitable material to locate a trail though it is slightly narrow at the crest making it steeply sloped. To support a trail, this area may have to be graded level slightly.

City of Rensselaer Boat Launch (Mile 4.0): In recent years, the City of Rensselaer created a boat launch for access to the Hudson River. This is a very popular spot and provides an opportunity to access the trail system from the south. While parking is generally available, during nice days, the boat launch is heavily used with a shortage of parking. Additional parking should be investigated as the trail is developed.

Boat Launch to Livingston Avenue Bridge, Including Forbes Avenue (Mile 4.0 to 4.5): The study area continues south from the boat launch to the Livingston Avenue Bridge. Because there are numerous private property owners in this area along the shoreline (see Appendix C for map of land ownership) it may be advisable to take the trail south of the boat launch and along Forbes Avenue until it reaches a cleared sewer right-of-way that provides direct access to the Livingston Avenue Bridge. This area along Forbes Avenue is one of the City’s oldest historic districts which can contribute to and enhance the trail experience.

At the Livingston Avenue Bridge, used for rail service only, it is the southern limits of this study area, future connections can be made to the bridge itself providing pedestrian access across the river to the City of Albany. Pedestrian access across the bridge was once available but currently is not promoted. At this point, the trail can also continue south and connect to the planned trail system leading toward the Rensselaer Train Station.
Southern Trail Access Point Images

Industrial area adjacent to boat launch

Rensselaer boat launch – rr crossing

Rensselaer boat launch – southern trail access point

Livingston Avenue Bridge

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The Trail

A. Mission Statement
In order to assist in designing this 4.5 mile segment of trail, a project mission statement was prepared. The purpose of the mission statement is to guide the design of the trail, identify its users, and define the ownership and maintenance requirements. Working with the committee the following mission statement was prepared:

The Livingston Avenue to Troy Menands Bridge Trail is a segment of the regional Hudson River Greenway system. The trail will be a recreational amenity for use by pedestrians and non-motorized vehicles only. It will be used for walking, running, biking, nature study, photography, and other similar uses. The trail will serve as a commuter route during three seasons of the year excluding winter. It is unlikely that snow will be cleared from the trail during the winter months thus supporting activities such as cross country skiing and snowshoeing. Cooperative trail management agreements between municipalities need to be considered to maximize the benefits and resources available for trail maintenance.

B. Proposed Alignment
The following section discusses the proposed trail alignment running from the north to the south. In addition to discussing the details of the trail, maps have been included that illustrate the overall trail alignment. With the exception of the area along River Road, the trail will be a 10' wide asphalt paved trail similar to the trail that is found along the west side of the river in the City of Albany. Along River Road the trail will be an 8' wide paved shoulder due to site constraints.
Northern Trail Access Point (Mile 0.0 to 0.5): Beginning at the northern end from mile 0.0 to 0.5, the trail would be designed to connect to the Troy-Menands Bridge as well as to the future trail system in the King Fuels site once it is remediated and the city street system in Troy. To connect to the Troy-Menands Bridge, one option could be to construct an elevated ramp that loops up to the abandoned trestle that crosses over Water Street. The location and slope of this ramp would be designed for easy access and safety for the trail user. The goal of this area is to connect to the Troy-Menands Bridge. Should it not be feasible to construct the trail ramp as depicted in the image below, other options should be considered that utilize the relatively large amount of land between the bridge and Water Street. While it will be challenging to incorporate the steep slope in the transition, the land in this area and abandoned train trestle can offer spectacular views to the river. Once at the same elevation of the trestle, the trail would connect to the beginning of the bridge for access over I-787 to Menands.

Northern Trail Access Illustration
River Road from King Fuel to the Narrow Section of River Road (Mile 0.5 to 1.3): To travel south from the trestle over Water Street, the trail would follow an 8’ wide paved shoulder along River Road from King Fuels at mile 0.5 to mile 1.3 at the southern end of the EPA clean-up site. In the area where the trail passes the EPA clean-up site it should be noted that a security fence will be required between the paved shoulder and the clean-up site. Rather than have a chain link fence with barbed wire on top, it is suggested to have a more aesthetically appealing fence that is friendlier to the trail user. When selecting a fence type, a sturdy fence that can withstand harsh winters along the river’s edge and occasional contact from pedestrians should be selected. The fence types below depict a sturdy fence that is durable.

An 8’ shoulder in this area would provide enough room for two trail users to pass each other safely or for a pedestrian and bicyclist to use the trail simultaneously. For safety reasons, a guardrail will be located between the paved shoulder and the roadway. Like the fence, a more aesthetically pleasing guardrail should be installed. The illustration on the next page illustrates the proposed trail configuration.

Another consideration for the EPA clean-up site would be to plant clover rather than grass on the cap when it is installed. Clover would provide for lower maintenance and offer an aesthetically pleasing texture and meadow effect.

River Road from the Narrow Section to the Rensselaer County Sewage Treatment Plan (Mile 1.3 to 1.6): From mile 1.3 to 1.6 at the Rensselaer County Sewage Treatment Plant, River Road is very narrow which presents difficulties in locating an 8’ wide paved shoulder. In this section, it may be possible to cantilever a walkway in portions off of the west side of River Road. Though not fully investigated from an engineering perspective, it may be an alternative to the paved shoulder of substantial width for pedestrian and bicycle use.
8’ Wide Trail Along River Road Illustration from Mile 0.5 to 1.3
**Rensselaer County Sewage Treatment Plant (STP) (Mile 1.6 to 2.0):** As River Road enters into the Rensselaer County STP at mile 1.6, it would transition down along a slight grade to the river’s edge. At that point the trail would follow a maintained lawn shelf that was created when the STP was constructed in the early 1970s. Between the trail and the STP facilities, a security fence will be constructed with gates allowing access for STP workers to the lands surrounding the trail. Due to occasional extreme winter conditions, ice flows are to be incorporated into the finalized design solution. At the south end of the STP, the trail will continue to follow the shelf and exit the STP property entering into the natural area in the center of the study area. The illustration on the next page illustrates the proposed trail configuration.

**Natural Area from the STP to the Patroon Island Bridge (I-90) (Mile 2.0 to 3.4):** As one enters into the natural area in the center of the study area at mile 2.0 the trail will follow an existing unimproved gravel road that is set back approximately 25’ from the river’s edge. While it would be nice to directly follow the river, the Army Corps of Engineers (ACOE) constructed a concrete embankment that is steeply sloped to the water (see photograph in ‘Issues and Opportunities’ section.) On damp and rainy days, this wall is extremely slippery and there are no barriers that would stop someone from potentially falling into the river and being caught by the fast moving currents. Therefore it is advisable to follow a trail that is somewhat removed from this feature. In the areas where the river is visible in this section, safety fences should be installed to prevent people from slipping into the river.

To offer variety along the trail it is suggested that a small loop trail be created around the tidal wetlands found in this area. This would provide an opportunity for trail users to picnic and view or photograph wildlife in this area. It could also provide an opportunity to loop back to the beginning of the trail rather than following the trail to its proposed terminus at the Livingston Avenue Bridge.

As mentioned above, the majority of the land in this portion of the study area is owned by the RPI Tech Park. Future plans of the Tech Park call for a waterfront convention center, an inland harbor, and an office building. When these items are constructed, the trail will have to be adjusted to accommodate these uses.

Another opportunity in this allows for a pull-out area for Hudson River paddlers. The stream outlet from the tidal wetlands provides for an opportunity to safely land a canoe or kayak. See the ‘Virtual Tour’ section above for a description of the improvements that would be necessary for a canoe/kayak access point. In addition, a viewing platform could be considered in this area. If constructed, beautiful views north and south along the river would be afforded.
Trail at Rensselaer County Sewage Treatment Plant Illustration from Mile 1.6 to 2.0

Trail at Shoreline Adjacent to Sewer Treatment Facility
From the tidal wetlands at mile 2.5, the trail would cross over the stream outlet using the existing gravel road that passes over two large culverts. At this point, the shoreline remains in a natural state therefore providing opportunities to locate the trail at the river’s edge without the hazard of the ACOE concrete stabilization feature. If this is not feasible, the trail can continue to follow the gravel road to the Patroon Island (I-90) Bridge at mile 3.4.

South of Patroon Island Bridge (I-90) (Mile 3.4 to 4.0): From mile 3.4 to mile 4.0, the trail will follow a berm that is approximately 45’ from the river’s edge. Because the berm is steep in some parts, it may have to be leveled off providing ample room for the trail. From this area, the trail would connect to the City of Rensselaer Boat Launch at mile 4.0. Because this area is already improved, it is suggested that it be enhanced as a southern gateway access point to the trail system. To keep vehicles from entering into the trail, a series of bollards would be installed. While the bollards would prevent random vehicular access, emergency vehicles could access the trail at an angle with the bollards. The illustration on the next page illustrates this concept.

Boat Launch to Livingston Avenue Bridge, Including Forbes Avenue (Mile 4.0 to 4.5): Rather than continue to follow the shoreline, it is proposed to take the route onto Forbes Avenue for approximately 2 blocks before heading back to the river’s edge. This is one of the most historic areas of the city and provides a beautiful setting in which to walk.

Exiting Forbes Avenue and moving back toward the river, the trail would follow a utility right-of-way to the Livingston Avenue Bridge which is the southern terminus of the study area at mile 4.5. At this point, future plans for a pedestrian walkway across the bridge would provide access from the City of Rensselaer to the City of Albany and its riverfront trail system.
Southern Trail Access at City Boat Launch at Mile 4.0
C. Trail Linkages

Along the trail there are numerous opportunities to link to existing and proposed trail systems. In collecting information and conducting field work, a number of trail connections were assessed. Following is a discussion of some of these opportunities and considerations as they develop.

King Fuels and the City of Troy Street System: The northern study limit of this project is the King Fuels site in the City of Troy. In the trail alignment section of this report, there is a discussion of potential linkages to the King Fuels Site and the City of Troy street system. Over the past few years, the City of Troy has studied the opportunity to redevelop its waterfront area. In addition to waterfront development, the City has also investigated the opportunity to continue the trail system through this area. Although waterfront planning has taken place, it will not be complete until the King Fuels site is remediated. Once this is complete, the connection from the proposed trail discussed in this report can be made into the City of Troy and its redeveloped waterfront. In addition, the Burden Visitors Center, located just north of the Kin Fuel site, offers parking, interpretation and services, which will be invaluable to the trail once this connection is completed.

In addition to following the waterfront, the trail is proposed to follow River Road and connect to the City’s sidewalks system. Once this connection is made, trail users can follow Burden Avenue and 4th Street into downtown Troy or Mill Street to Vandenburg Avenue to Hudson Valley Community College.

RPI Tech Park Trails: When the RPI Tech Park was designed, it included a series of trails between the buildings in the upland portion of the property and the riverfront. In addition, the plans include a riverfront trail system. While it appears that there are ample opportunities to connect to the RPI trail system, there is an active rail line between the proposed trail discussed in this report and the RPI trails. As shown on the maps, it is suggested that as the RPI Tech Park builds out and a new road is constructed linking the uplands to the riverfront, trail connections be made at that time. Given the length of time, cost, and difficulty in working with the railroad, it may not be feasible to consider a trail crossing developed strictly for trail users.

City of Rensselaer Waterfront and City Street System: Similar to the City of Troy, the City of Rensselaer is completing plans for the redevelopment of its waterfront area. In addition to a broad scale planning effort, there has been a New York State Department of State funded study to locate a trail from the new train station north to the Livingston Avenue Bridge which is the southern study limit for this project. Working with the consultant hired to locate and design this portion of the trail, the intent is to directly connect to the trail discussed in this report.

Livingston Avenue Bridge: In recent years, there have been discussions of restoring pedestrian access along the Livingston Avenue Railroad Bridge. Used long ago as a connection between Rensselaer and Albany, access to the bridge has been removed. Restoring this connection is one of the goals of this
study. By providing a direct link between Rensselaer and Albany, pedestrians would have safe and easy access to downtown Albany. CDTC and NYSDOT indicated their strong support for repairing the pedestrian route along the railroad bridge, along with other bridge repair work that may likely receive grant funding. In addition, Albany completed a study to redevelop the area around the Central Warehouse building as an inner harbor retail and entertainment area. Restoring this connection would provide direct access.

I-90 Connector: There are currently plans to construct a new road linking I-90 to the area in the vicinity of Hudson Valley Community College. The proposal is to locate the road through the RPI Tech Park and to include pedestrian facilities such as a bicycle lane and landscaping. While construction is not planned for sometime into the future, once the connection between the proposed trail discussed in this report and the RPI Tech Park Trails is made, a connection to this new facility would be possible. This would provide important linkages from the riverfront to the commercial area on the north end of the Town of North Greenbush including Hudson Valley Community College, LaSalle Institute, retail shops, restaurants, and the Joe Bruno Baseball Stadium.

D. Trail Management Plan

A trail and park that traverses several communities presents some coordination issues as well as opportunities. From the perspective of the park visitors and trail users, the facility looks like one trail or park, so rules and regulations as well as signs should be the same, or at least very similar. Maintenance and security functions should be closely coordinated for efficiency, taking full advantage of the strengths of all of the municipalities and private entities that have some responsibility for parts of the trail.

The following assumptions regarding trail management should help guide arrangements for sound management:

- It is anticipated that primary trail use will be between May and October with peaks occurring during weekends, special occasions and on weekday afternoons evenings, however some use can be expected at all times of the year. Commuters will use the route in increasing numbers as the trail is extended north and south.

- Use will be only from dawn to dusk until lights are considered for a future phase of the project. Special events, such as fireworks at Corning Preserve would require sections of the trail with temporary lighting to accommodate the added visitors.

- The trail will not be snowplowed for the winter until additional development within the project area or added commuter trail connections warrant this expenditure. In the meantime cross-country skiing and snowshoeing can be anticipated when snow
conditions permit. The ponds should be marked as closed to activities on the ice because the tidal fluctuations will not permit a safe ice surface to develop (“thin ice, please keep off”).

- A Hudson Water-trail landing site has been proposed near to a stream outlet about mid trail. If this rustic facility is developed, the location would also be ideal for a shoreside / streamside picnic area and fishing access point.

- There will be occasions when a flood event, storm or ice flows blocks the trail. The trail would simply be closed at those times until use is safe.

- While the paved bike route will attract the most users, unpaved internal trails and access to the waterfront will be used and will require occasional off trail management. A “friends of the trail” organization can be especially effective in providing this oversight and help with scheduled litter pick-up and other tasks.

- A “carry-it-in, carry-it-out” policy for trash removal can be effective for some trails. Signs are needed asking for the public’s cooperation with this policy, otherwise strategically placed receptacles will have to be maintained. Most trash accumulates near to parking and a few remote picnic areas.

- Grassed trail shoulders would be mowed along trailside for aesthetics, safety and insect control. Leaves need to be collected where they accumulate on the rail and in drainage inlets. Branches extending over the trail and lower than approximately 8' would be trimmed at least each spring, and dead branches near the trail need to be removed (note; deep snowpack, storms or ice on tree limbs may add to this task). Occasionally the trail needs to be swept clear of gravel and debris. Unusual weather may cause trees and branches to fall requiring the clean-up of hazards. The responsibilities for and the schedules of these maintenance tasks should be merged with the tasks assigned to staff and equipment performing similar work in the municipalities and on private holdings.

- The police, who are assigned to nearby patrols would provide security. Patrol schedules would be coordinated, but varied, so the public will not be able to predict the times that the trail will be checked. If security personnel without police powers are assigned to the trail (a good option once the trail becomes popular or for special events), then a clear understanding of the protocol required to call for police or emergency services will be needed. Since security personnel may enter from one jurisdiction, then end their beat in another municipality, an agreement between the communities may be advisable for cost-effective policing.
- During and after trail construction a significant initial effort will be required to stop motorized trail use, dumping and hunting where these activities are not permitted or planned. It is probably not desirable to make an extensive effort to enforce these “rules” before the trail is close to construction.

- Regular inspections, including annual supervisory and engineering reviews are recommended to check for maintenance needs and to suggest improvements.

To best use the strategic location of each entity along the trail, the following responsibilities are suggested. These suggestions are first for directly after a trail is constructed, then as a second stage, when facilities are developed in the central portion of the property, possibly to include a road and railroad bridge connecting the east and west segments of the RPI Tech Park, a conference center and a Town Park.

- The City of Rensselaer will already have responsibilities for a trail located south of the Livingston Avenue RR Bridge as well as the boat launch site. The staff maintaining, policing and managing these facilities would also be responsible for the operation of the trail segments in that City. If possible patrols should continue at least up to the I-90 bridge area, since a lot of the trails from Rensselaer enter the trail system at that point.

- The City of Troy would patrol the section of Water Street and River Road, preventing some of the unauthorized dumping that the City recently cleaned up, and helping to provide some security possibly as far south as the Rensselaer County Sewage Treatment Plant. The Plant workers, as well as the employees entering the school bus storage site (north of the trail) would be instructed to report problems that they see along the trail to Troy staff.

- The Town of North Greenbush would assign maintenance workers and police to cover work and security for the route within their jurisdiction. It is recognized that this may somewhat overlap with the tasks undertaken by Troy and Rensselaer or even the RPI Tech Park staff, but it would be preferable to have these overlaps to having unmanaged sections of the trail.

As more facilities are located along the waterfront between Rensselaer and Troy, it is possible that a mini-park system be established to maintain the grounds of the facilities established by the Tech-Park and the Town as well as the trail. If this system becomes a reality, then increased maintenance staff, equipment, storage and procedures will be needed. At that time it will also be realistic to decide if unarmed security assigned to the “park” could augment the occasional police oversight that the initial trail will warrant.
E. Cost Assessment

The cost assessment developed for this study represents a concept level construction cost evaluation. Summary cost totals are presented for the identified trail section beginning at the northern terminus connection point of the study.

The Trail section and associated construction budgets are presented as follows:

Section I - Northern Trail Access Point includes the access from the Troy Menands Bridge, placement of the trail paralleling Water Street and connecting with the City of Troy Street system, refurbishment work on the train trestle, and the at-grade railroad crossing.

Section II - This section of the Trail parallels the river side of River Road starting near the at-grade railroad crossing extends in a southerly direction to the entrance of the Rensselaer Sewage Treatment Facility (STP).

Section III - The Trail section located within the boundaries of the STP.

Section IV - The Trail section located within the boundaries of the land parcel owned by the Town of North Greenbush.

Section V - The Trail section located within the boundaries of the land parcel owned by National Grid

Section VI - The Trail at the Rensselaer Tech Park parcel extends from the National Grid parcel south to the crossing point of the Patroon Island Bridge overhead.

Section VII - This trail section is situated on the southern edge of the Rensselaer Tech Park parcel at the Patroon Island Bridge and extends south to the public boat launch site.

Section VIII - Trail at the City of Rensselaer public boat launch parcel.

Section IX - Trail section along Forbes Avenue section that parallels the roadway as a sidewalk.

Section X - The southern most section of the Trail connecting Forbes Avenue to the Livingston Avenue bridge.

The budgetary values used in the cost assessment are based on construction and material costs for the year 2004. The cost summaries that follow include for each component or line item a 30% contingency
This contingency factor is a multiplier that addresses design development considerations as well as design and engineering costs associated with trail implementation.

Each Trail section line cost summary, excluding Section II and IX, includes a line item for a ten foot wide asphalt paved trail based on a cost per linear foot. Section II is an eight foot wide trail and Section IX is a concrete sidewalk with curbing. This linear foot cost includes layout, clearing of the trail route, the asphalt paved trail, temporary and permanent soil stabilization and construction clean up.

<table>
<thead>
<tr>
<th>Trail Section</th>
<th>Qty.</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Estimated Cost</th>
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<tr>
<td>1. Northern Access Area - Connection to Troy-Menands Bridge</td>
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<td>C. Extend Light Standards from Parking Area to Gateway</td>
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<td>9. Forbes Avenue</td>
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(*) 10' Wide Paved Asphalt Trail LF Cost
Includes:
1. Layout
2. Clearing and Grubbing (Typ. 30' width)
3. Asphalt Pavement System with Aggregate Base
4. Permanent Soil Stabilization (Vegetative Cover)
5. Temporary Erosion Control Measures
6. Clean-Up

Rensselaer County Trail
Livingston Avenue Bridge to Troy-Menands Bridge
F. Next Steps

This report presents a proposed trail alignment for the 4.5 mile segment of the Hudson River Valley Greenway Trail system. The purpose of this study was to examine the feasibility of the trail and identifying issues and opportunities related to the development of the trail. At this ‘master plan’ level, detailed design and construction analysis of the trail was not undertaken. The following steps will be necessary to implement construction of the proposed trail.

- Survey – A boundary and topographic survey is necessary to understand the details of the project area. This includes land ownership, slopes and grades, and above and underground utilities.
- Design and Engineering – Contract with a design firm (i.e., Landscape Architect) and solicit engineering services to complete the detailed design and construction documents for the trail.
- Permits – Investigate what permits may be necessary for construction of the trail.
- Acquire Access Easements – Contact landowners and develop access easements for the trail as it passes through private property.
- Coordinate with Communities – Review this report and the trail management section with the City of Rensselaer, Town of North Greenbush, and the City of Troy. As the detailed design and construction documents are prepared, the cities and town should continue to be involved.
- Grants – Seek grant funds from CDTC, Hudson River Greenway, Scenic Hudson, NYS Department of State, NYS Office of Parks Recreation and Historic Preservation, NYS Department of Transportation, and others to construct portions of the trail.
Appendix A
Proposed Trail Alignment
Appendix B
NYS DEC Correspondence
June 14, 2004

Mr. James VanHoesen, Director  
Bureau of Construction Services  
Division of Environmental Remediation  
New York State D.E.C.  
625 Broadway, 11th Floor  
Albany, N.Y. 12233-04

Dear Jim:

Thank you for your help and suggestions regarding establishing a Hudson River Valley Greenway bicycle and pedestrian trail in the area of the National Grid and the King Fuel brownfields remediation projects located in North Greenbush and South Troy. Both your staff and the National Grid contractors' field engineers have been very helpful in working with our steering committee for the completion of this important trail segment.

As you requested, we are attaching a design sketch which depicts additional project information for the trail section located at the National Grid site in South Troy. It is our feeling that the proposed design concept will provide trail access without compromising the remediation project.

Background:

Trails segments along the Hudson River have been progressing for many decades. The Mohawk-Hudson bike trail on the Albany site along I-787 is being reconditioned this fall, after twenty-five years of intensive use. Also, a re-established pedestrian crossing on the Troy to Menands Bridge is planned. The Hudson River Valley Greenway (Greenway) program, established by the State of New York in 1991, has been working on the development of this trail network on both sides of the Hudson River for over a decade. A report now being completed, entitled the Draft Hudson River Valley Greenway Trail Vision Plan outlines the need for this important section. Page 45 of this draft report discusses the 4.5 mile section of trail in Rensselaer County that pertains to our project and includes the National Grid remediation site.

The Capital District Transportation Committee (CDTC) has focused on the importance of establishing a desirable and safe network of bicycle and pedestrian routes throughout the region. CDTC's New Visions plan and advisory committees indicated strong public support for this initiative. CDTC shares the responsibility with the Greenway of advancing the bike/pedestrian trail by working to help complete an important link in this regional network.
Local governments and major landowners have added their support for the riverfront trail. The Troy Pedestrian and Bicycle Trail Plan (1999) is being advanced by the City. The section of this report pertaining to the River Road area adjacent to the remediation sites only addressed this area conceptually, as the clean-up action had not been initiated at the date of that report. The City and County of Rensselaer; the Town of North Greenbush; the RPI Tech Park and the Rensselaer County Wastewater Treatment Plant, which are the major landowners south of the project, all support the project.

The Issue:

River Road, which covers approximately one mile of the 4.5 mile long portion of this trail segment, has relatively low traffic volumes. However, it is very narrow and is bordered on one side by the clean up site and includes steep embankments. This one mile area also includes a rarely used rail line which is located on the east side of proposed site.

Field analysis verified that tanker trucks operated by sanitary services often speed to the treatment plant to discharge and return to their work. Workers at the National Grid clean-up site complained about this hazard for pedestrians. Enforcement of speed zones are at best spotty, and are not a safe solution for a connective link to popular hiking and walking trails.

Given these realities, designing the trail alignment in this section is difficult. The project’s trail consultant, the Elan Planning & Design team, has considered a number of options for this area and reviewed them with the advisory committee, including the transportation safety experts from CDTC. Four-foot road shoulders located on both sides of River Road were considered, but deemed less safe due to a possible increase of speed as a result of the added road width.

Requested Site Design:

As you may know, we have met with various individuals regarding the clean-up activities and were briefed on many of the requirements of the National Grid remediation project. As a result, we believe that the request presented herein will not compromise the remediation site.

From the south end of the clean-up site to the north end, the Elan Planning & Design team is suggesting a paved 8’ wide trail with a security fence between it and the clean-up site and a guide rail between it and River Road. While a 10’ wide paved trail would be preferred, as is the design for other parts of the trail, we appreciate the limitations of road width along this section and believe an 8’ wide trail would be adequate.

Additionally, the original plans for the clean-up site illustrated a chain link fence topped with barbed wire between the clean-up site and the roadway. While the barbed wire appears to be removed, we would also like to explore the possibility of a more aesthetically pleasing fence. We are suggesting various choices for fence types, preferably, a black vinyl-
coated fence. While a coated chain link fence is not our first choice, it would provide for a much more aesthetic environment for the trail user.

Our consultant, Elan Planning & Design, would be happy to discuss any details associated with this concept. Please keep in mind that the level of this work is at the Master Plan stages and specific construction details will be part of a subsequent effort. However, if there are details that can be accommodated at this stage, we would be happy to discuss them with you.

The King Fuel Site:

Although this segment of the trail terminates at the King Fuels site in South Troy, it is imperative to consider future extension of this trail heading north to the urban center of the City. Please note that the concept sketch shows the segment of the trail we have studied, with the proposed linkage extension. The trail would be more pedestrian friendly if it could maintain an 8’ width in the northern portion of the planned trail, and would certainly be more advantageous for the future proposed trail section. We have studied an additional option, which could use an abandoned rail spur that begins directly across the CSX rail line located adjacent to the small construction trailer north of the National Grid project (see photo #2). In both scenarios, the future primary trail route paralleling the River would ultimately have to cross the King Fuel site to carry out Troy’s, CDTC’s and the Greenway’s plans.

We suggest an early dialogue regarding these trail design issues and the plans for the brownfields remediation project for the King Fuel site. Your suggestion for facilitating this conversation would be appreciated.

Thank you again for your help and the help of your staff. Please let us know if any additional information will help you advance this request for a solution that will provide a much-appreciated and long awaited public benefit along these remediation project sites.

Sincerely,

Carmella R. Mantello
Executive Director

CC: Hon. Harry Tutunjian, Mayor, City of Troy
Paul Tazbir, Supervisor, Town of North Greenbush
Jessica DesLauriers, Hudson River Valley Greenway
Jason Purvis, CDTC
Joe Fama, City of Troy
Elan Planning & Design, Project Consultant
June 25, 2004

Michael Lotti, P.G.,
National Grid USA Service Co.,
25 Research Dr.,
Westborough, MA 01582

RE: Troy Water Street Former MGP Site,
Troy, Rensselaer Co., Area 4, Bicycle Trail

Dear Mr. Lotti:

As you know, a bicycle trail on a portion of the Troy Water Street Site (both Areas 4 and 2) has been anticipated for some time. The Department recently received correspondence (dated June 14, 2004) from the Hudson River Valley Greenway (HRVG) regarding the trail which I am forwarding to you. The Department would appreciate Niagara Mohawk, A National Grid Company’s continued attention to HRVG’s project. Once you have had the opportunity to review, I suggest a telephone conference or meeting be held to advance the project.

Please telephone me at (518) 402-9669 if you have any questions.

Sincerely,

John Spellman, P. E.
Project Manager
Division of Environmental Remediation

cce:
Carmella R. Mantello, Hudson River Valley Greenway
Hon. Harry Tutunjian, Mayor, City of Troy
Paul Tazbir, Supervisor, Town of North Greenbush
Jessica DesLauriers, Hudson River Valley Greenway
Jason Purvis, CDTC
Joe Farna, City of Troy
Lisa Nagle, Fta Planning and Design
Appendix C
Property Ownership
Appendix D
Potential Water Landing Site