KINDERHOOK

INTER-MUNICIPAL TRAIL
FEASIBILITY STUDY

STUYVESANT

STOCKPORT
K-S-S Inter-municipal Trail Feasibility Study

Kinderhook
Stuyvesant
Stockport

UAlbany Masters of Regional Planning Studio
THE FALL 2010 TRAILS PLANNING STUDIO

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EXEClCTIVE SUMMARY

This report considers the feasibility of developing a multi-use recreational trail system in the Village of Kinderhook and the towns of Kinderhook, Stuyvesant, and Stockport in Columbia County, NY. The proposed project is tentatively called the Kinderhook-Stuyvesant-Stockport Intermunicipal Trail ("K-S-S trail system"). The study was funded through a $10,000 grant from the New York State Hudson Valley Greenway Conservancy. It was conducted by graduate students from the University at Albany Geography and Planning Department studio program.

The K-S-S trail system consists of two proposed routes:

**National Grid Right-of-Way Trail ("ROW trail")**
This proposed trail starts in the Village of Kinderhook and follows the active National Grid utility right-of-way (ROW) southwest for 5.6 miles through the Town of Stuyvesant and the Town of Stockport. It passes directly through the hamlet of Stuyvesant Falls. The crushed stone sub-base and compacted stone dust surface would be appropriate for pedestrians, cyclists, and equestrians. Motorized vehicles would be prohibited. Development of this trail would require the municipalities to sign a license agreement with National Grid. The three municipalities intend to sign a long-term lease agreement with National Grid to use the right-of-way.

**Kinderhook Creek Trail**
This proposed route also begins in the Village of Kinderhook but follows the east side of the Kinderhook Creek for 4.82 miles, ending at Stuyvesant Falls. It passes directly past the Van Alen House and the Martin Van Buren National Historical Site (Lindenwald) on Route 9H. Most of the trail surface would be a simple pedestrian footpath, although some segments may eventually accommodate bicyclists and horseback riders. To make this a continuous trail, municipal officials would have to secure easements from the owners of several large parcels of private land.

This feasibility study explains how the K-S-S trail system could:

- Promote community health and well-being;
- Become a bike-pedestrian trail loop that connects key historic sites that are several miles apart and provides users with unprecedented access to the Kinderhook Creek corridor, a prime natural resource and a major Hudson River tributary;
- Foster development of businesses and services that cater to trail users;
- Give users a bird’s-eye view of local farms and promotes “agri-tourism”;
- Complement and dovetail with planned trail development at the Martin Van Buren National Historic Site (Lindenwald);
- Extend the Town of Kinderhook trail project along the National Grid ROW to connect the Villages of Valatie and Kinderhook, including two elementary schools, a middle school, and a junior-senior high school — all of which are near the ROW;
- Eventually connect to the Harlem Valley Rail Trail, Scenic Hudson’s Harrier Hill in Stockport, and the Columbia Land Conservancy’s Greenport Conservation Area.
The proposed trails could provide safe opportunities for walkers, runners, cyclists, equestrians, and nature observers. The towns of Kinderhook, Stuyvesant, and Stockport each have their own population centers, historic sites, natural resources, parks, and recreational facilities. The K-S-S trail system could link these vital resources and promote their use among local residents and tourists. The Village of Kinderhook has several key historic sites: the Columbia County Historical Society Museum, the James Vander Poel House, and President Martin Van Buren’s grave site. Several miles away are two other primary historic venues: the Luykas Van Alen House and Lindenwald. The proposed trail system could link these historic sites with Stuyvesant Falls and Chittenden Falls, home to the hydro power plants that began powering the Albany & Hudson Railroad in 1895.

**An outgrowth of local and regional planning**
The K-S-S trail system is a direct outgrowth of the 2003 Recreational Trail Design and Feasibility Study, issued by the Kinderhook Town and Village Trail Committee. It also was funded by a grant from the Hudson Valley Greenway Conservancy. The 2003 report outlined a similar multi-use recreational trail along the same National Grid ROW in the Town of Kinderhook and the Villages of Kinderhook and Valatie (“Town of Kinderhook Trail project”). Development of this three-phased project is scheduled to begin in the spring of 2011, once the municipalities sign a long-term lease agreement with National Grid. Planning and development of the Kinderhook Trail project will provide key lessons for advancing the K-S-S trail system.

The involved municipalities, along with land preservation/conservation groups, have promoted the development of a recreational trail system in their long-range plans:

- Comprehensive plans adopted by the Village of Kinderhook (1999 and 2007 update), the Town of Kinderhook (2000), and the Town of Stuyvesant (1996) recommend the creation of a multi-use recreational trail system to link population centers and public amenities.
- For more than a decade the Columbia Land Conservancy (CLC) and the Open Space Institute (OSI) have preserved farmland and open space along the Kinderhook Creek “corridor” through conservation easements that include specific recreational trail easements.
- The Hudson Valley Greenway Conservancy has identified the National Grid ROW as a potential “greenway” trail. The ROW cuts a 30-mile arc from Hudson to Rensselaer and follows the same route as the historic Albany & Hudson Electric Railroad, established in 1895.

This study will be submitted to the participating municipalities to help them plan, obtain funding for, develop, operate, and maintain the proposed K-S-S trail system. It will also be used to inform local residents and users groups about the proposed trail system and secure their comments and feedback.
PLANNING PROCESS

The Planning Studio and the Kinderhook Trails Committee undertook a four-month process to evaluate the feasibility of the six trail sections (the committee includes representatives from all three towns). Existing conditions of the proposed rights-of-way were examined; a site analysis was performed to identify the opportunities and challenges to developing each section. A schematic design depicting trail widths, composition, major drainage features, and other engineering features was developed, along with cost estimates to construct and maintain the trail. The Planning Studio also researched the history and culture of the three communities to further identify opportunities for educational interpretation along the trails. Finally, two public meetings, several meetings with landowners, and a resident survey were conducted to ascertain residents and landowners’ support and desire for a trail system.
TRAIL MAP SECTIONS
INTRODUCTION

This project, conducted by graduate students in a regional planning studio class at the University at Albany, studies the feasibility of developing a multiple-use trail system connecting the towns of Kinderhook, Stuyvesant Falls, and Stockport in Columbia County, New York. This trail system is important not only to the towns in which it is located but could also be a component of a much larger, integrated trail system that ultimately connects communities throughout the Hudson Valley.

The study details the opportunities and challenges to the construction of a trail system and identifies the tasks necessary to complete such a project. It also identifies alternative trail routes in areas where there are significant barriers to completing the proposed route.

The study examines two potential corridors between Kinderhook and Stockport. The first corridor follows the path of the former Albany & Hudson Railroad. Today, the corridor is wholly owned and operated by National Grid as a right-of-way (ROW) for its power lines. The second trail corridor runs along the Kinderhook Creek, which parallels the National Grid ROW to the east. This trail section — running from Stuyvesant Falls east to the Martin Van Buren National Historic site (Lindenwald) and back to the Village of Kinderhook — would be much more rugged and natural than the National Grid ROW. Many of the properties along this route have conservation easements with the Open Space Institute (OSI) that specifically include a public recreational trail easement along the creek. However, because portions of this route go through flood plains along the creek, the trail will likely be a footpath and not a bike trail. Maps accompanying each segment description will further detail this routing. Specific details and illustrations are shown in the appendices.

Local residents and public officials have already laid the groundwork for the proposed Kinderhook-Stuyvesant-Stockport Intermunicipal Trail. In 2003, the Town of Kinderhook completed a feasibility study — funded by a grant from the Hudson Valley Greenway Conservancy — for developing a multi-use recreational trail along the same ROW, but further north in the Village of Valatie and the Town of Kinderhook. This is called the Town of Kinderhook Multi-Use Recreational Trail Project (“Kinderhook trail project”). The 2003 study also recommended extending the ROW trail south into Stuyvesant and Stockport — which is the focus of this document.

The Kinderhook Trail Committee in May 2011 signed a licensing agreement with National Grid to begin developing the Kinderhook trail project in three phases. This agreement could eventually serve as a prototype for a similar licensing agreement between National Grid and the three towns involved in the Kinderhook-Stuyvesant-Stockport Intermunicipal Trail Project. Although these two projects will hopefully create a continuous ROW trail, it is critical that the reader understands these are entirely separate projects. The Kinderhook Trail project is now in the first phase of developing the ROW trail; the K-S-S trail project is still in the study/planning stages.
NATIONAL GRID RIGHT OF WAY

Rothermel Avenue Park to Smith Road

Segment 1: Rothermel Avenue Park to Smith Road
Rothermel Avenue Park to Smith Road

This section of the trail follows the National Grid right-of-way from the historic buildings and quaint neighborhoods of the village of Kinderhook south to the Town of Stuyvesant border near Smith Road. It would likely be the most heavily used section of the trail.

Existing Conditions & Site Analysis

The northern head of the ROW trail lies adjacent to Rothermel Avenue Park, a popular public park with ample recreational infrastructure. The park has three baseball diamonds, a soccer field, tennis court, basketball court, batting cage, playground equipment, a picnic pavilion with grills, public rest rooms, two water fountains, two parking lots, bicycle parking, and a concession stand. The playground is a prime location for trail users to begin their journey.

A view of the ROW at Rothermel Avenue Park in the Village of Kinderhook. On the left side is Samascott’s Orchards.

- Several very significant historic sites lie within a quarter-mile north and east of Rothermel Park: President Martin Van Buren’s grave, the Columbia County Museum (home of the Columbia County Historical Society), the James VanderPoel House, and the Burgoyne House. In 2003 the Town of Kinderhook completed a ROW trail feasibility study that covers the ROW section north of Rothermel Avenue Park.
- As the trail moves south of the playground, it abuts private homes, but most of these properties are at least partially buffered from the right-of-way with brush and plantings. It is also built largely on flat fill, owing to the right-of-way’s history as a railroad corridor. These characteristics greatly enhance the feasibility of developing a trail along this section.
- The trail crosses two moderately traveled neighborhood roads, Eichybush Road and Gaffney Lane, before emerging at the more rural southern end of this section. Eichybush Road is low to moderately traveled, with a speed limit of 30 to 40mph. It is a flat road in generally good condition. The trail crosses Gaffney Lane on a potentially dangerous blind corner. These two crossings could be avoided by routing trail users from Rothermel Park along three streets — Rothermel Avenue, Eichybush Road, and Gaffney Lane — then back to the ROW as it heads south from Gaffney Lane.
South of these neighborhoods, open fields afford breathtaking views of the Catskill Mountains across the Hudson River to the west. After the trail enters the Town of Stuyvesant, it crosses Kinder Drive and passes Kinder Farms, an equestrian facility. Horseback riders currently use this section of the ROW; they strongly support continued equestrian use of the ROW here.

Kinder Farms horse stables adjacent to the ROW near Smith Road. Equestrians who ride from here currently use the ROW and support the creation of a multi-use recreational trail.

**DESIGN CONSIDERATIONS**

This section has great potential for shared use among pedestrians, bicyclists, and equestrians. Running parallel to U.S. Route 9, a major thoroughfare, this section is likely to see heavy use by pedestrians and cyclists. Horseback riders from Kinder Farm stables near Smith Road currently use this section of the ROW and wish to use a completed trail. Touring cyclists will rely on this section to connect Kinderhook and Stockport.

The ROW through this section is well graded and drained, requiring minimal engineering work to develop a trail surface. Paved surfaces may require additional base coursework, pending engineering studies. Illustration 1 in Appendix D details a typical cross-section for this section with a paved surface.

The Federal Highway Administration recommends that recreational trails provide an equestrian “tread” separate from the pedestrian/bicycle trail. Due to width constrictions, the equestrian tread has been abbreviated from full-width opposing lanes to an oversized single lane. This will require pedestrians and cyclists to reduce speed while passing equestrians.

Specific design opportunities and challenges regarding this section are described in Appendix A.
EDUCATION AND INTERPRETATION

- The former Kinderhook Railroad Station for the Albany and Hudson Railroad lies a quarter-mile north of Rothermel Avenue Park at the intersection of County Route 21 (Albany Avenue) and Railroad Avenue. The station has been fully restored as a private home.
- Ample parking and amenities at Rothermel Avenue Park make it an excellent location for users to begin the trail.
- A kiosk and trail map detailing the trail project and its history should be set up at Rothermel Avenue Park to educate trail users on the importance of the trail to Kinderhook, Stuyvesant, Stockport and the Hudson River Valley.
- At the intersection of the ROW and Eichybush Road, the Albany and Hudson Railroad serviced a “flag stop” called Ogden. At flag stops, trains would stop if residents waved them down with a newspaper, usually lit on fire at night. This could be highlighted with historic signage and relevant information.
- The main gate of Samascott’s Orchards lies just northwest of the trail, on Sunset Drive. This presents an opportunity for a partnership with the orchard, which has a farm store on-site and another retail facility a half-mile away. The orchard has also been the site of trail races organized by the Kinderhook Runners Club.
- Further along Eichybush Road is a breathtaking view of the Catskill Mountains to the west — an ideal area to rest, take photos, or enjoy a picnic lunch. Trail signage could point this area out and encourage further exploration.
- A grassy, open area at the intersection of the ROW and Smith Road could be used as a resting place, possibly with benches. Limited space also exists there for a parking area.

Apple trees at Samascott’s Orchards in Kinderhook Village drop their bounty.
Smith Road to Stuyvesant Falls
Smith Road to Stuyvesant Falls

The middle section of the ROW trail is largely rural in character, with farms, open fields, and excellent views of the surrounding countryside. At the southern end of this segment, the trail passes through a historic mill area built around the two-stepped Stuyvesant Falls on the Kinderhook Creek. The southern terminus of the Kinderhook Creek trail is nearby and could serve as a natural hub for a potential trail system.

Existing Conditions and Site Analysis

This section begins at the intersection of the ROW and Smith Road. From here to Sunnyside Road, the right-of-way bisects two large farms, which use it for general farm operations, plantings, and as an access road to U.S. Route 9. Several people who own homes in the area also use it as a driveway for access to US 9. Because of the significant difficulties of routing the ROW trail through these farms, it has been re-routed to Smith Road, Route 9, and Sunnyside Road. The on-road alternative is described in the section on schematic design.

For nearly a mile south of Sunnyside Road, the ROW traverses relatively level terrain. Much of the ROW surface along this section is built on elevated fill, with cinders still visible from its days as a railroad bed. Just south of Sunnyside Road, farmers use parts of the ROW to access their properties on either side of the ROW. Further south, the ROW closely parallels the Kinderhook Creek; a private landowner there with a conservation easement could potentially allow public access to the creek. Where the ROW meets County Route 25 near Stuyvesant Falls, the trail is overgrown with thick vegetation and a crosses the outlet from a small pond.
A very small park on County Route 25, owned by the Town of Stuyvesant, provides an outstanding view of upper Stuyvesant Falls and the restored 100-year-old steel-truss bridge that carries the road over the creek. There is a pedestrian walkway on the bridge. A kiosk there explains the history of the Stuyvesant Falls Hydro Station, which provided the first electric power to the region in 1901. The 1.8-million KWH plant is being renovated and will be operational in 2012.

The steel-truss Stuyvesant Falls Bridge was built in 1899 and renovated in 2000. It is listed on the National Register of Historic Sites.
DESIGN CONSIDERATIONS

Just south of Smith Road, the ROW runs directly through the barnyard and structures of Wil-Roc Farm. While it is possible to build a trail surface through Wil-Roc Farm, routing the trail through the farm may be problematic for trail users and disruptive to the farm owners. A better approach would be to re-route the trail from the ROW east along Smith Road to U.S. Route 9. The trail would turn south on Route 9 for approximately 800 feet, then turn left onto Sunnyside Road. The trail continues on Sunnyside Road for about 3,500 feet, then turns south on the ROW toward Stuyvesant Falls.

Routing the pedestrian and bicycle activity along the road network will require coordination with state and county highway departments for signage, striping, and a crosswalk. There is some concern about sight distance at the proposed crossing. By relocating the trail crossing to Smith Road, the trail gains increased highway sight distance, allowing a safer crossing zone for all traffic modes. Shifting the trail to less-traveled Sunnyside Road will also help mitigate safety concerns for crossing Route 9. On-road shared use are detailed in Illustrations 3 and 4 in Appendix D. A detailed map of this area is shown in Appendix E on page 75.

Equestrians from Kinder Farms, off Smith Road, currently ride horses on the ROW north into the Village of Kinderhook. They strongly support the idea of continuing to allow equestrian use of the trail. An exclusive “equestrian tread” may need to be maintained along the ROW trail to allow equestrians to continue riding north; another equestrian tread may be needed for several hundred feet along Smith Road.

It will be more difficult, however, to accommodate horseback riders on the ROW trail from Smith Road south. Horses and riders would first have to cross Route 9, a two-lane road with a 35 mph speed limit and limited sight distance. They would have to ride about 800 feet along Route 9 before turning left onto Sunnyside Road. A bike lane could be installed on Route 9 to accommodate cyclists. The possibility of securing easements from private landowners along Route 9 to develop an 800-foot pedestrian/equestrian sidewalk or trail should be explored. A detailed map of this option is shown in Appendix E on page 75.

- For nearly a mile south from Sunnyside Road to Hotaling Lane, the right-of-way continues along flat terrain. For approximately the first quarter-mile, it is used as an access road to farm properties on either side of the right-of-way.
- Near the approach to Stuyvesant Falls, an area of thick brush prevents access for the remainder of the right-of-way until its intersection with County Route 25A. A nearby pond just to the west of the right-of-way is used to supply the fire department with water. Because of this, a 20-foot-long ravine cuts across the right-of-way at this point.
- This section of the ROW is well-graded and well-drained, requiring minimal engineering work to install a trail surface. One exception is a quarter-mile south of Sunnyside Road, where the ROW drains poorly. This section will require some grading work and possibly culverts or a tile drain. Illustrations 1, 2, 5, 6, and 7 in Appendix D detail cross-sections for this section. Due to the decreased density of business and housing, this section will likely carry less pedestrian traffic. This section could support pedestrian and bicycle activities with minimal additional engineering. Specific design opportunities and challenges regarding this section are described in Appendix A.
A view of the 27-foot upper Stuyvesant Falls from a footpath on the east side of the Kinderhook Creek. The footpath would begin the proposed Kinderhook Creek trail.

**Education/Interpretation**

- The Kilcer farm along Sunnyside Road should be posted on the trail map, with a specific reminder that trespassing is prohibited. Historic markers there highlight the historic significance of two 17th century Dutch farmsteads nearby.
- The trail’s approach to Stuyvesant Falls is an ideal centerpiece area for the entire trail system. The two-step waterfall, historic mill buildings, a small park along the creek, and a restored steel-truss bridge all present excellent opportunities for rest, education, and photography.
- The steel-truss bridge across the Kinderhook Creek serves as an access point for those continuing onto the Kinderhook Creek Trail on the east side of the creek. Signage should indicate the crossing, with a map of the Kinderhook Creek Trail near the bridge. A kiosk near the bridge explains the historic significance of how the Stuyvesant Falls hydropower plant powered the “third-rail” electric railroad and supplied power to the region, beginning in 1901.
(Left) Stuyvesant residents gather for the dedication of a kiosk explaining the history of hyro power at Stuyvesant Falls. The upper falls is in the background. (Right) Allied Healthcare Products owns this historic mill building at Stuyvesant Falls and leases park land near the falls to the Town of Stuyvesant. (Bottom) A view of the upper falls from the park.

The Allied Healthcare Products mill building overlooking Stuyvesant Falls is on the National Register of Historic Places.
Stuyvesant Falls to Rossman Road
**STUYVESANT FALLS TO ROSSMAN ROAD (STOCKPORT)**

This section of the ROW trail parallels the Kinderhook Creek through farmland and mixed hardwoods. For most of this stretch, trail users would be out of view from the homes of most adjoining landowners. Although it presents opportunities for appreciating nature and history, this section is the most physically challenging part of the ROW trail due to several washouts and a large ravine. These challenges may require more extensive re-engineering of the trail compared with sections to the north.

**EXISTING CONDITIONS & SITE ANALYSIS**

Between Woods Lane at Stuyvesant Falls and Keil Road to the immediate south, the right-of-way passes through a large ravine, which is marshy and overgrown. There is evidence of a washed out 40-foot high embankment there with a concrete box culvert. The steep slopes of the ravine would probably require a “switchback” pedestrian trail, with a small bridge at the bottom to cross a seasonal stream. Signs would be needed to recommend that cyclists walk their bikes through the ravine. Ravines like this are a common topographic feature in the area and provide a good venue for observing birds, wildlife, flora, and fauna.

**Keil Road detour:** An alternative route for cyclists is to bypass the ravine and use Route 9. For example, a cyclist coming north on the ROW would turn left onto Kiel Road for about 300 feet, right onto Route 9 for several hundred yards, then right onto New Street to reconnect to the ROW north of the ravine. This section of Route 9 is a 45 mph speed zone with several curves. However, Keil Road is a private road, so public access would have to be negotiated with the owners.

View from the ROW at Keil Road looking east. The brick building is the Stuyvesant Falls Hydropower plant, on the east side of Kinderhook Creek.

**Access from cemeteries:** Two alternative routes – which avoid both the ravine and Keil Road – would be to develop a connector trail from the ROW to Route 9 through either Stuyvesant Falls Cemetery or St. Paul’s
Cemetery on Route 9. The rear sections of both cemetery parcels abut the ROW. Stuyvesant Falls Cemetery is 0.1 mile south of the intersection with Keil Road; St. Paul’s Cemetery is 0.3 miles south of Keil Road. For example, a cyclist pedaling north on the ROW from Stockport would detour through one of the cemeteries to Route 9, then head north on Route 9 to reach New Street, the side street in Stuyvesant Falls that connects to the ROW. Either option would require securing an easement from the cemetery’s board of directors.

- The area near Keil Road affords scenic views of Kinderhook Creek and the historic hydropower station across the creek to the east.

- About halfway between Rossman Road and Keil Road is a major washout where a culvert failed within the past year. This washout does not span the entire ROW, but erosion evidence suggests that it may in the near future. Despite the washouts and drainage problems, National Grid has done extensive maintenance on this ROW section, parts of which resemble a crushed stone roadway. The company’s ongoing maintenance work here is an encouraging sign that this section can eventually accommodate a multi-use trail.

- Just north of Rossman Road and Chittenden Falls, the ROW runs parallel within 200 feet of the Kinderhook Creek, yet the stream frontage itself is privately owned. These landowners should be asked if they would agree to an easement allowing public access from the ROW across a narrow strip of their land to the creekside.

(Left) A major washout on the ROW in Stockport will require extensive work. (Right) Members of the Kinderhook Trails Committee survey wet spots on the ROW along the Kinderhook Creek near Chittenden Falls.

- Near the intersection of the ROW and Rossman Road are several homes with a common driveway. Although this area is ideal for a trailhead and for parking, it is privately owned. Trees, bushes, and other plantings may be needed here to create a privacy screen for these residents.
This ROW segment ends at Rossman Road adjacent to Chittenden Falls, where another hydropower station provides electricity to the region. Several areas overlooking the falls could provide impressive views, but they are privately owned and would require an easement.

**DESIGN CONSIDERATIONS**

Routing a multi-purpose trail through the large ravine north of Keil Road will be challenging. Because the trail will have to traverse steep slopes going into and out of the ravine, and will be subject to erosion, it may not be feasible to develop and maintain a crushed stone base and stone dust surface here. A well-maintained footpath may be more appropriate, with a sign asking cyclists to walk their bikes through the ravine until the crushed stone path resumes.

(Left) Photo of a historic, fatal train wreck in Stockport in the early 20th century. (Right) Railroad bridge piers near Rossman Road.

South of Keil Road, the ROW presents some significant engineering challenges, which must be addressed to complete the trail to Stockport. In many places along this stretch, the ROW is built into a hillside so that water has nowhere to drain except downhill onto the ROW surface. Several ravines and washouts will require repair prior to laying a surface course. For the larger gaps, earth embankments with drainage culverts or bridges may be required. For smaller gaps, earthen embankments with drainage culverts should suffice. Marshy terrain also presents a challenge, both in terms of environmental protection and engineering. A drainage study should be performed to determine how to route both the standing water and storm water overflow. Results of the study will determine where overly saturated soil should be removed and replaced and where new culverts could help prevent erosion. Protected wetlands will need to be identified and necessary work permits obtained.

If these challenges can be overcome, this section of the ROW could be a shared use pedestrian and bicycle trail and could be considered for future equestrian use. Illustrations 1, 2, 5, 6, and 7 in Appendix D depict this section. In the meantime, if an agreement is reached with National Grid, this section could be hiking trail with bicycle traffic rerouted to CR 25 from Stuyvesant Falls to Chittenden Falls.

Specific design opportunities and challenges regarding this section are described in Appendix A.
(Above) Chittenden Falls and the Chittenden Falls Hydro Power plant on the far side of the Kinderhook Creek. The area’s railroad and hydropower history could be explained with signage or a kiosk nearby.

**Education/Interpretation**

- South of the intersection of the ROW and Keil Road, there is an excellent overlook of the Kinderhook Creek and the Stuyvesant Falls hydropower plant, which resumes operation in 2012. This area abuts private property and would have to be identified with a no-trespassing sign.
- Benches could be built from downed trees along the creek trail and placed strategically for trail users. At the southern end of the trail, near the intersection with Rossman Road, a historical marker should identify the location of Rossman Mills, across the creek. Here, 19th century industries printed wrapping, bank note paper, and other high quality papers. The marker could also describe some of the historic train crashes that occurred nearby.
Alternate Bicycle Route: County Route 25 from Stuyvesant Falls to Chittenden Falls

Due to the significant physical challenges of the Stuyvesant Falls-Chittenden Falls section of the ROW, it may not be able to accommodate cyclists. An alternate bike route has been identified. Starting in Stuyvesant Falls, cyclists could take County Route 25 on the east side of the Kinderhook Creek. This route proceeds southwest to Rossman Road/Chittenden Falls. County Route 25 is primarily flat and open, with one significant hill and a limited shoulder. This alternative can be examined in greater detail if cyclists cannot use the ROW.

County Route 25 near the hamlet of Stuyvesant Falls is lightly traveled and could be a bicycle route if the Stockport section of the ROW cannot accommodate cyclists.
Kinderhook Creek Trail

The proposed Kinderhook Creek Trail, entirely distinct from the National Grid ROW, begins in the Village of Kinderhook, where the Kinderhook Creek runs under Chatham Avenue (County Rte. 21). The proposed trail route runs south along the creek, behind the historic Luykas Van Alen House and the Martin Van Buren National Historic Site (Lindenwald) on Route 9H, and continues through active farmland to Stuyvesant Falls. Because portions of this trail route are in a flood plain along the creek, it will probably not be feasible to develop a multi-use trail with a crushed stone/stone dust surface. Instead, a well-designed, well-maintained pedestrian footpath – with several small footbridges to span seasonal streams – would be more appropriate.

The owners of several large land parcels along the creek (green-colored parcels on map) have signed conservation easements with the Open Space Institute (OSI) requiring the owners to allow a public recreational trail along the creek. Other landowners, who have not signed such agreements, would have to agree to public easements if the trail is to be continuous. This is unlike the National Grid ROW trail, which does not require the municipalities to secure easements from individual property landowners.

Because the creek trail will probably not accommodate cyclists, we also outline potential road routes that cyclists could use to access various points of both the creek trail and the ROW trail.

A placid backwater of the Kinderhook Creek in summertime near Stuyvesant Falls.
Rothermel Avenue Park to Hudson Street Bridge
**Rothermel Avenue Park to Hudson Street Bridge**

A quarter-mile north of Rothermel Avenue Park, the ROW crosses Albany Avenue. To reach the Kinderhook Creek Trail from there, users would go east on Albany Avenue, cross Route 9 in the historic center square of Kinderhook, until the juncture of Albany Avenue and the creek. A village-owned parcel of land here could provide limited parking. Albany Avenue has pedestrian sidewalks until the intersection with Maiden Lane, beyond which the sidewalk continue on only one side until it reaches the creek. The street could be adapted for bicycle use with minor modifications.

The Village of Kinderhook will reconstruct Albany Avenue from Sunset Avenue to Route 9 (pictured below). The roadway will have 10-foot wide travel lanes and 8-foot wide parking lanes with granite curbing. New 4-foot wide sidewalks and storm drains will be installed. The 2003 Town of Kinderhook Trail Feasibility Study included Albany Avenue and provides more details.

**Existing Conditions and Site Analysis**

The roads connecting the Rothermel Avenue playground to the Kinderhook Creek bridge are already well-designed for pedestrians and could be adapted to bicycles with limited modifications. Broad Street (US 9) has sidewalks on both sides, as does Hudson Street (CR 21) until its intersection with Maiden Lane, beyond which the sidewalk continues on one side. At the juncture of County Route 21 and the Kinderhook Creek, the Village of Kinderhook owns a land parcel that could be used for parking to begin the creekside trail.

The Village of Kinderhook plans to reconstruct Albany Avenue from Sunset Avenue to Route 9. The roadway will have 10-foot wide travel lanes and 8-foot wide parking lanes with granite curbing. New 4-foot wide sidewalks and storm drains will be installed. Further analysis and existing conditions are described in greater detail in Appendix A.

*Center of Kinderhook Village:* Tree-lined County Route 21 (Albany Avenue) is pictured here going straight ahead. Historic highlights within walking distance include the Columbia County Museum, the Van der Poel House, and a life-sized bronze statue of President Martin Van Buren.
**Design Considerations**

This section of trail links the Village Playground to the east side of Kinderhook Creek. Development of this link will require signage and striping Albany Avenue for pedestrian and bicycle activity. Figures 2 and 4 in Appendix D detail typical cross-sections for this section. Local highway authorities must be consulted for extensive specifications and requirements.

It is expected that this section will support pedestrian and bicycle activities with minimal additional engineering effort. Support from highway authorities will be required.

Specific design opportunities and challenges regarding this section are described in Appendix A.

**Education/Interpretation**

- After leaving Village Playground, the potential routing of this section brings it alongside the historic “downtown” in the village of Kinderhook. This connects trail users to a variety of local businesses.

- Adequate parking is available by the bridge on CR 21. This area also has room to post a kiosk with a map of the trail, marked with destination points. On the other side of the map, photos and information should describe the history of the creek, its early usage, and the flooding. Additional seating, picnic tables and bike racks should be installed at the parking area.

(Left) The James Vanderpoel House (1818), also called the “House of History,” is a classic example of Federal period architecture. It is operated by the Columbia County Historical Society and is open to the public during the summer. (Right) Bikes parked near a café at Kinderhook’s center square. The village is a hub for local runners and cyclists.
Hudson Street Bridge to Lindenwald
**Hudson Street Bridge to Lindenwald**

This section brings trail users from the densely populated village into a unique natural setting, with scenic vistas of the Kinderhook Creek and surrounding countryside, mainly farmland.

**Existing Conditions and Site Analysis**

This section begins where County Route 21 cross the Kinderhook Creek in the Village of Kinderhook. It runs immediately through property whose owner opposes development of a public trail. If this landowner (or future owner) is unwilling to grant public access, the trail would have to be re-routed onto Route 9H south. There are two possible places along Route 9H to begin a connector trail leading to the Kinderhook Creek.

**Luykas Van Alen House:** The Columbia Historical Society owns and administers this historic site. The property surrounding the house extends from Route 9H down to the Kinderhook Creek. The property abuts Roxbury Farm, which has an OSI conservation easement allowing for a creekside trail. The owners of Roxbury Farm and officials from the Columbia County Historical Society support the idea of developing a loop trail from the Van Alen House to the Kinderhook Creek and back — roughly 1.5 miles. This area also has several existing farm lanes, portions of which could possibly be used for the trail.

(Left) The Luykas Van Alen House property and adjacent Roxbury Farm extend from Route 9J down to the Kinderhook Creek. These parcels could accommodate a loop trail from the house to the creek and back.
(Right) Martin Van Buren home at Lindenwald. The U.S. National Parks Service supports the plan to develop a creekside trail on the property and a connector trail leading to the mansion. The Parks Service will pay for development and maintenance costs of trails within the park boundaries.

**Martin Van Buren National Historic Site (Lindenwald):** The site recently expanded its boundaries to include privately owned lands with OSI conservation easements held by the National Parks Service. They also have begun an extensive project that explores Martin Van Buren’s life as a farmer after his presidency. The land, which includes part of the current Roxbury Farm, has been farmed continuously since the early 1800s. Continuation of agriculture is very important to Lindenwald and is considered essential for telling the story from Martin Van Buren’s time to the present.
Lindenwald administrators are working closely with the Kinderhook Trails Committee and support the plan to develop a creekside trail on the property and a connector trail leading to the mansion. The Parks Service will fund the development and maintenance of any trails within the park boundaries. However, specific siting of the trails will depend on the location of landmarks in the park that are nationally significant relative to Martin Van Buren. Trails will be located, designed, and constructed to minimize interference with the agricultural use of the property. Trail development will also comply with the terms of existing OSI conservation easements.

Park facilities — including parking, bike racks, and rest rooms — will be available to trail users. Possible trail uses within the park will include walking, jogging, biking, cross-country skiing, and horseback riding.

Because future trail routes at Lindenwald have not been identified, the maps in this report do not depict trails within the park boundaries. However, Park Service officials intend to connect Lindenwald trails to the north via Old Post Road. Trail connections from Lindenwald south are explained in the next section.

**DESIGN CONSIDERATIONS**

Where the trail route begins in the Village of Kinderhook, it passes through a large privately owned parcel whose owner opposes the idea of allowing public access to his property along the creek. A second property owner, adjacent to Lindenwald, also has not consented to allowing public access. If both owners continue to decline public access, the trail should be designed to circumvent those properties, as discussed above, and create the most continuous trail possible.

- Numerous drainage ditches and seasonal streams cross the proposed trail route in this section will require small bridges.
- Floodplain and wetland surveys for this section indicate a number of significant challenges in developing the trail. Specific design opportunities and challenges regarding this section are described in Appendix A.
EDUCATION/INTERPRETATION

- If a trail loop is developed from the Van Alen House, a sign/map will be needed at the point where the trail turns off Route 9H toward the creek. This sign/map should also indicate how to reach Roxbury Farm, Lindenwald, and the Martin Van Buren Trails on Route 9H opposite Lindenwald.

- One or more fishing access points could be identified in places where the trail runs close to the Kinderhook Creek.

- Roxbury Farm currently hosts groups of school children and adults for educational events. We expect them to continue their educational tours and anticipate that a public trail will increase the number of people who tour Roxbury Farm and expand their understanding of agriculture and food production.

- The National Parks Service will decide what educational/interpretational signs are developed within Lindenwald boundaries.

(Above) Near Lindenwald, a wildflower covered overlook of Roxbury Farm shows fields growing and animals grazing.
Lindenwald to Stuyvesant Falls

Segment 6: Lindenwald to Stuyvesant Falls

Legend:
- Municipal Boundaries
- Creek Trail
- Lindenwald - Creek Trail Connector
- National Grid RCV
- Sunnyvale Rd Alternative
- Route 25 Alternative
- Route 25 - Lindenwald
- National Historic Landmarks
- Creek
- Local Roads
- County Road
- State Route
- Parks
- Property Boundaries
- Conservation Easements

0 0.125 0.25 0.5 Miles
LINDENWALD TO STUYVESANT FALLS

The final section of the Kinderhook Creek trail runs from Lindenwald south for two miles to the top of the upper Stuyvesant Falls. Much of this section traverses several large land parcels whose owners have OSI conservation easements. These easements allow for the development of a public recreational trail directly adjacent to the creek. Only one landowner does not have an easement.

EXISTING CONDITIONS AND SITE ANALYSIS

It is currently unclear how the trail will be routed south of Lindenwald. As noted in the previous section, maps in this document do not depict trail routes within the park boundaries. National Parks Service administrators will choose a trail configuration that avoids disrupting Roxbury Farm operations and accounts for significant historic landmarks related to President Van Buren.

A full moon rises over Roxbury Farm property near Lindenwald.

Bortugno farm: Heading southwest from Lindenwald/Roxbury Farm along the creek, there is a land parcel whose owner has not signed a conservation easement granting permission for a public trail. Continuing toward Stuyvesant Falls, the trail route crosses the Bortugno farm, which includes an OSI conservation easement allowing for a public recreational trail. The trail route will have to closely follow the creek to avoid interfering with farm operations. Several small bridges will be needed to cross seasonal streams that enter the Kinderhook Creek. Close to Stuyvesant Falls, the trail route must either cross a 30-foot wide inlet that connects the creek to a backwater pond or circumvent the pond entirely. A portable bridge or innovative permanent bridge design will be investigated.
**Stuyvesant Falls**: As the trail route approaches the upper Stuyvesant Falls, it runs alongside the creek through a deep pine grove (photo below), an ideal site for camping and picnicking. The trail then descends alongside the 27-foot upper falls. Several overlooks provide excellent views of the falls, but a railing or wire cable would have to be installed for user safety.

At the base of the upper falls, the Town of Stuyvesant leases a small parcel of land from Allied Healthcare Products, which owns a nearby historic mill building. The town has developed a small park, with picnic tables, grills, and access to a “sandbar” beach on the creek. The park could serve as an ideal trailhead for the Kinderhook Creek Trail and as an access point for the National Grid ROW trail, just across the bridge on the west side of the creek.

A pine grove alongside the Kinderhook Creek, just above Stuyvesant Falls, ideal for picnicking and camping.

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**Road Alternatives for Cyclists**

Because the Kinderhook Creek Trail will probably not accommodate cyclists, we explore here road alternatives that cyclists could use to connect to various access points on the creek trail.

**Kinderhook Village to Lindenwald**: Chatham Street intersects with Route 9H several hundred feet east of the beginning of the Kinderhook Creek Trail. Cyclists could turn right onto Route 9H and proceed south for one mile to reach the Van Alen House. Route 9H is flat, with good shoulders and sight distance and a 55 mph posted speed limit. A quarter-mile further south, Old Post Road angles off to the right and parallels Route 9H for a short distance before it reaches Lindenwald. There are several homes on Old Post Road, but thru traffic is not allowed, making it ideal for cycling. The road passes directly in front of the Lindenwald mansion, parking area, and bicycle racks.
Lindenwald to Stuyvesant Falls: Lindenwald is adjacent to the intersection of Route 9H and County Route 25. Cyclists can turn right onto County Route 25 and reach Stuyvesant Falls in two miles. County Route 25 is flat and wide open, with good sight distance and scenic views of farmland and the Catskill Mountains to the west. The posted speed limit is 45 mph.

Stuyvesant Falls to Rossman Road (Stockport): If the National Grid ROW from Stuyvesant Falls to Rossman Road cannot be developed into a multi-use trail, cyclists could re-route along County Route 25. From the hamlet of Stuyvesant Falls, County Route 25 heads southwest through open farmland. The road is lightly traveled, in good condition, has excellent sight distance, and is posted at 45 mph. As it approaches Chittenden Falls and the intersection of Rossman Road, County Route 25 descends a fairly steep, winding hill. Cyclists would then turn right onto Rossman Road, cross the Kinderhook Creek bridge, and be at the southern terminus of the ROW trail.

As previously shown, Illustrations in Appendix D provide details for the on-road section of the trail.

Short-term efforts should focus on establishing a hiking trail along the creek (to the extent possible) and routing cyclists to use along County Route 25. Specific design opportunities and challenges regarding this section are described in Appendix A.

Education/Interpretation

- A trail sign and map would be needed at Lindenwald to direct trail users southwest along the creek trail to Stuyvesant Falls.

- A separate sign and map may also be needed near the bicycle racks and parking area in front of the Lindenwald mansion to explain road alternatives to cyclists.

- A trail map and sign would be needed at the parking area on Rossman Road at the southern end of the ROW trail to explain the County Route 25 road option to cyclists.

Potential campsite: This placid stretch of the Kinderhook Creek, just above upper Stuyvesant Falls, is a potential camping and picnicking area at the beginning of the Kinderhook Creek Trail.
SUSTAINABILITY, SAFETY, OPERATION AND MAINTENANCE

SUSTAINABILITY

The success and sustainability of the Kinderhook-Stuyvesant-Stockport Intermunicipal Trail will depend upon the cooperation and coordination of all community trail interests. An effective, comprehensive trail maintenance program will be essential to the long-term success of the project and will ensure both the safety and enjoyment of the residents and visitors who use the trail. Trail maintenance and sustainability will also depend upon trail volunteer groups, sustainable funding sources, trail community fundraising events, and various trail support services. This section examines and makes recommendations for trail maintenance and safety, building and maintaining local support for the trail, trail-related economic development, and trail marketing opportunities that will promote the trail’s overall sustainability.

SAFETY

Safety is a major concern of both trail users and adjacent property owners along the trail. A safe trail environment depends on good trail design, law enforcement, and the joint cooperation and stewardship of people in the towns of Kinderhook, Stuyvesant and Stockport. The presence of legitimate trail users will be the most effective deterrent to criminal or inappropriate activity on the trail. Good trail access and visibility, a high level of trail maintenance, trail safety inspections, and a trail watch program will encourage trail safety.

Trail Access: Access to neighborhoods, community centers, points of interest, and conveniently located trailheads along the trail are important. Access points and related signs should be clearly visible to welcome the public onto the trail.

Visibility: Both trail users and residents who live near the trail can provide surveillance. Although some screening from the trail may be needed to ensure the privacy of adjacent landowners, the presence of willing and interested neighbors will increase trail safety.

Maintenance for safety: Good maintenance of the trail and its amenities will discourage people from engaging in criminal or inappropriate activity along the trail.

Safety Inspections: Regular inspections of the trail and its amenities can increase trail safety. Periodic trail inspections by the towns of Kinderhook, Stuyvesant and Stockport should document the overall condition of the trail and any potential hazards such as erosion, washouts, overgrown vegetation, or fallen trees. Corrective maintenance should be scheduled as recommended by the trail operations and maintenance policy.

Trail Watch Program: A trail watch program, involving education on recognizing and reporting suspicious activity, would allow local residents to become actively involved in crime prevention along the trail. They can serve as the “eyes and ears” of each trail section.
OPERATIONS AND MAINTENANCE

Trail administrators will need to establish policy for short-term and long-term operation and maintenance by town employees or volunteers. The following items are recommended:

- A cooperative operations and maintenance agreement between the Village of Kinderhook, the Town of Kinderhook, the Town of Stuyvesant, and the Town of Stockport.
- A short-term and long-term trail maintenance schedule.
- A seasonal trail maintenance policy. Trash receptacles should be placed at access points, Town employees or volunteers should pick up litter along the trail as needed.
- Appropriate fencing and landscape buffers should be encouraged to ensure privacy of adjacent landowners. Trail access points should be clearly marked and trails rules should be posted that encourage respect of private property. Signage listing the rules for safe and courteous trail usage should be placed at all trailheads.
- A trail snow removal policy.
- Regularly scheduled trail inspections to identify necessary repairs to the trail or to trail amenities.
- A trail security policy, including trail patrols by local law enforcement, community bike patrols and an emergency response plan.
- A trail liability policy and adequate liability insurance.
- Identify sustainable funding sources for maintenance.
- Guidelines and training for trail maintenance volunteers.
- Cooperative maintenance agreements with other government entities or private organizations.
### Table 1. Recommended Trail Maintenance Schedule

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Maintenance</th>
<th>Performed by</th>
</tr>
</thead>
<tbody>
<tr>
<td>As needed</td>
<td>Tree/brush clearing, sweeping &amp; mowing</td>
<td>Towns or volunteers</td>
</tr>
<tr>
<td></td>
<td>Sign repair &amp; replacement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trash &amp; litter removal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Replace &amp; repair trail support amenities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Repair flood damage, culvert cleanup, etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Patching/minor re-grading/stone dust replacement</td>
<td></td>
</tr>
<tr>
<td>Seasonal</td>
<td>Tree &amp; shrub planting and pruning</td>
<td>Towns or volunteers</td>
</tr>
<tr>
<td></td>
<td>Culvert cleanout</td>
<td></td>
</tr>
<tr>
<td>Yearly</td>
<td>Surface evaluation to determine need for patching or re-grading</td>
<td>Towns</td>
</tr>
<tr>
<td></td>
<td>Evaluate trail support services to determine the need for repair or replacement</td>
<td></td>
</tr>
<tr>
<td>5-year</td>
<td>Paint/repair benches, bridges, signs, etc.</td>
<td>Towns or volunteers</td>
</tr>
<tr>
<td>10-year</td>
<td>Resurface/re-grade/restripe trail</td>
<td>Towns, contractors or volunteers</td>
</tr>
<tr>
<td>20-year</td>
<td>Replace/reconstruct trail</td>
<td>Towns, contractors or volunteers</td>
</tr>
</tbody>
</table>

(Adapted from Irondequoit Creek Valley Multi-Use Trail Feasibility Assessment and Design Recommendations, Environmental Design & Research, October 2008; pgs. 41-42)

### Trail Surface Comparison

**Stone dust trails:** The trails have a soft but firm natural material surface, can be installed at a moderate cost, and can accommodate multiple uses; runners and equestrian users especially benefit. Stone dust trails require consistent surface maintenance and replenishment of surface material due to erosion.

**Asphalt trails:** Have a hard surface that is not as susceptible to erosion and requires relatively low routine maintenance. They provide an all-weather use trail that can accommodate most users and specifically benefits cyclists and inline skaters. The disadvantages include high installation costs and costly repairs due to surface cracks.

**Native soil trails (footpaths):** These are low-cost, low maintenance trails that are the easiest for volunteers to build, alter and maintain. Disadvantages include the uneven nature of the surfaces and possible drainage problems.

### Building and Maintaining Local Support for the Trail

Successful trail groups build relationships with local and regional organizations that are interested in providing services to maintain the safety and viability of the trail. The Kinderhook Trail Committee has formed a group called Friends of Kinderhook Trails, which is now registered as a 501C-3 not-for-profit organization. It can accept donations from individuals and groups who wish to deduct their charitable contributions for tax purposes.
The three municipalities plan to maintain the K-S-S trail system primarily with volunteer labor and limited assistance from the towns' highway and recreation departments. Some of the groups they will approach for help include:

- Local Boy Scout and Girl Scout troops
- Local 4-H group
- School-based community organizations
- Kinderhook Runners Club
- Sportsmen’s clubs
- Local chapters of the Elks Club, Lion’s Club
- Friends of Lindenwald

**Relationships with Key Organizations**

The Kinderhook Trail Committee has developed strong relationships with several organizations whose cooperation is critical to the project’s success:

**U.S. National Parks Service:** The NPS has a dedicated Rivers, Trails & Conservation Assistance Program. The New York State projects director for this program regularly attends Kinderhook Trail Committee meetings and closely monitors how the K-S-S trail system will dovetail with Lindenwald’s expansion and trail development.

**Columbia Land Conservancy:** This highly successful land conservancy has provided the project with extensive technical assistance. A full-time CLC municipal planner attends Kinderhook Trail Committee meetings and has helped the committee forge relationships with many key individuals and groups.

**Columbia County Department of Economic Development and Tourism:** Members of the Kinderhook Trail Committee have begun meeting with county officials to discuss how the K-S-S project can promote tourism and generate local economic growth.

**Harlem Valley Rail Trail Association:** The 46-mile rail trail through Dutchess and Columbia counties continues to be developed and will terminate at its northern end in Chatham. The trail serves as a prototype for the K-S-S project. The associate chairman (for Columbia County) of the group’s board of directors also serves on the Kinderhook Trail Committee. The K-S-S project leaders will look for ways to connect the K-S-S trail to the Harlem Valley Rail Trail.

**Columbia County Historical Society:** The historical society owns and administers the Luykas Van Alen House, the Columbia County Museum, and the James VanderPoel House. The group’s administrators support the K-S-S project and its potential for drawing more visitors to these historic sites.
Stockport Creek Watershed Alliance (including Kinderhook Creek): This group is part of the Hudson River Watershed Alliance. Through grant funding from the state Department of Environmental Conservation’s Hudson River Estuary Program, the alliance promotes watershed protection and management. Because the K-S-S trail system will closely follow the Kinderhook Creek corridor, the project leaders see many opportunities to work with the alliance.

Trail-related events can be scheduled to promote use and cleanup of the trail. Some examples of these events include: various fundraisers, litter clean-ups, cycling or running races or triathlons, school-related trail events, and tours of historic places.

The Hudson Valley Rail Trail, for example, offers a wide variety of community-oriented events, including a learn-to-run program, a Harvest Moon walk, a gala under the stars, a 5-kilometer race/walk, a Winterfest, and Breakfast Along the Black Creek.

**Promoting Local Economic Development**

The success of any trail depends on how much it improves the local community. One measure of success is the local economic development that a trail can generate. Trails support tourism connected with local historic sites, farms, and other businesses. Trail related tourism has grown throughout the country, and specifically in New York State along the Canal Trail. Gasoline prices, stagnant wages, and higher costs have convinced many people to vacation near home. Specifically, bicycle tourism and other adventure based tourism have been growing rapidly. According to the US Travel Association, bicycling is now the third most common vacation activity. The combination of these factors bodes well for communities with multi-use trails.

To benefit from the trends, local officials should develop strategies that promote the trail as a thoroughfare to experience the region. Increasing tourism can bring new dollars into the region that will help sustain the trail itself, local farms, historic sites, and other businesses. Potential opportunities include:

- Bed and breakfasts within villages and along the trail that are bicycle friendly and tailored to the outdoor enthusiast.
- Restaurants or shops that focus on local food produced along the trail.

- Bicycle, fish and tackle, canoe, and kayak rental or retail stores. Farm stands or farmer’s markets selling local produce along the trail system.

- Tours of the two hydropower plants located along the ROW.

- Local business promotional opportunities such as “Adopt a Trail” or “Friends of the Trail.” Horseback riding lessons, tours, and a tack shop to buy equestrian gear.

Ice cream shop along the Harlem Valley Rail Trail.

**MARKETING THE TRAIL**

The Kinderhook Trails Committee has developed a website (insert web address) for both the Town of Kinderhook Trail project and the K-S-S project. It will be updated regularly to reflect the progress of both projects. A promotional brochure/map has been printed and a PDF of the brochure is now on the website. The brochure will be distributed locally and posted on the towns’ websites.

- Build on or replicate marketing efforts that the Friends of Kinderhook Trails use to promote Phases 1-3 of the ROW trail further north in the Town of Kinderhook.

- Work with the Columbia County Historical Society, the National Park Service, and the Friends of Lindenwald to mutually promote the trail and the historic sites operated by the groups.

- The Columbia Land Conservancy held its first annual Columbia County Trail Conference in April 2011; it provided an ideal opportunity to promote the K-S-S trail.

- Conduct outreach to local/regional running and cycling groups, such as the Kinderhook Runners Club, Albany Running Exchange, Hudson-Mohawk Road Runners Club, and Hudson-Mohawk Wheelmen.

- Work with local schools, health teachers, and physical education teachers to encourage students to use the trails and promote healthy lifestyles.

- Provide trail information to Parks and Trails New York, the Columbia Land Conservancy, the Columbia County Department of Economic Development and Tourism, and other organizations that will promote its use.
COST ESTIMATES

ACQUISITION/EASEMENT COSTS

The hard costs associated with the acquisition of land or easements can fluctuate for a variety of reasons, including size, location, development or farming value and enthusiasm of current owners for the project. Soft costs for acquisition, including land surveying and legal fees, tend to be more stable. Land surveying for an easement or purchase would include boundary mapping and legal description of the parcel. As any land acquisition for the K-S-S Inter-municipal Trail would be relatively small in size, expected costs for land surveying should fall in the $2,500 to $3,500 range per parcel. There would also be legal fees and filing charges. These costs run between $1,500 and $2,500 per parcel.

ENGINEERING COSTS

There are many items that can be included in the cost of engineering a project of this type. They include:

- Project design.
- Planning and permitting in accordance with local codes or state or federal environmental regulations.
- Preparing construction/contract documents.
- Administration and oversight of contract work.

The fees associated with these services typically run from seven to thirteen percent of construction value. The range in fees can vary, depending on the overall budget and phasing of the project. Much of the overhead and administrative costs remain similar when design costs can fluctuate, due to the size and complexity of a project. For this reason, larger projects with fewer phases will see overall engineering costs as a percentage of construction costs go down, and will be toward the lower end of the estimated design fees. Conversely, when a project is made of many small phases, the fees associated with administration and oversight will go up.

CONSTRUCTION COSTS

The cost estimate for construction of this project has been prepared using data collected from on-site verification of existing conditions, information provided by the local trails committees on use and required surface type, current standard prices for NYSDOT items, and recent costs for similar local projects. The costs proposed may vary, depending on final design solutions for various items including bridges, drainage, landscaping and project phasing. All values are current as of the date of this report.
## KINDERHOOK-STUYVESANT-STOCKPORT INTER-MUNICIPAL TRAIL FEASIBILITY STUDY

### NG ROW COSTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>LOCATION</th>
<th>LENGTH (miles)</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - NG ROW</td>
<td>Village Playground to Smith Rd</td>
<td>1.29</td>
<td>$257,463.00</td>
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<tr>
<td>2 - NG ROW</td>
<td>Smith Rd to Stuyvesant Falls (with detour)</td>
<td>1.97</td>
<td>$460,058.00</td>
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<tr>
<td>3 - NG ROW</td>
<td>Stuyvesant Falls to Rossman Rd (full build-see Appendix)</td>
<td>2.27</td>
<td>$1,134,300.00</td>
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<tr>
<td>3A - NG ROW</td>
<td>Alt: along County Route 2S to East of NG ROW</td>
<td>2.39</td>
<td>$1,575.00</td>
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<tr>
<td><strong>Total NG ROW Cost</strong></td>
<td></td>
<td><strong>7.92</strong></td>
<td><strong>$1,853,396.00</strong></td>
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Stuyvesant Falls to Rossman Road costs assume a full build - see Appendix for hiking only costs.

<table>
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<th>SECTION</th>
<th>LOCATION</th>
<th>LENGTH (miles)</th>
<th>COST</th>
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<tr>
<td>4 - Creek</td>
<td>Village Playground to Bridge - 9H</td>
<td>0.76</td>
<td>$1,675.00</td>
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<tr>
<td>5 - Creek</td>
<td>Bridge - 9H to Lindenwald</td>
<td>2.12</td>
<td>$9,825.00</td>
</tr>
<tr>
<td>6 - Creek</td>
<td>Lindenwald to Stuyvesant Falls</td>
<td>1.94</td>
<td>$5,325.00</td>
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<td><strong>Total Creek Cost</strong></td>
<td></td>
<td><strong>4.82</strong></td>
<td><strong>$16,825.00</strong></td>
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**Total Trail Cost**

$1,870,221.00

*see appendix for detailed section break downs

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## TRAIL MAINTENANCE COSTS

Approximate average annual routine short-term trail maintenance costs are listed below (Source: americantrails.org):

- Stone dust trails $2,042 per mile.
- Asphalt trails $2,525 per mile.
- Native soil trails $1,500 per mile.

Trail maintenance costs vary based on current labor rates, material costs, and the level of volunteer support. Long-term maintenance costs are not included since they will be based upon future labor rates, material costs and available volunteer support.
PUBLIC INVOLVEMENT AND OUTREACH

INTRODUCTION AND BACKGROUND

“Public involvement is the key to any successful trail planning effort. If you institute and carry out a comprehensive public involvement campaign, you will create a plan that meets the needs of the local community, while generating trust and support between your agency or organization and the public.”

—Charles Fink, Kristine Olka, Robert Searns

A critical element of this feasibility study, as with any trail planning process, is extensive and sustained public involvement and outreach. With community participation and support, the process of planning and building a trail can be a uniting and enriching experience for all residents. Without it, the chance for long-term trail success and community-building is greatly diminished.

SCOPE OF WORK

The first step in conducting public outreach was for UAlbany Studio students to form a strong relationship with the Kinderhook Trail Committee, which includes representatives from Stuyvesant and Stockport. This committee serves as the governing body for the trail planning process. As the client of the project, the committee provided the Studio team with key insights on trail analysis, schematics, historical and cultural connections, and public outreach. The two groups conducted extensive field work together and met regularly during the fall of 2010.

COMMUNITY INVOLVEMENT BACKGROUND

Kinderhook Town officials have sought to develop a multi-use trail on the National Grid ROW since the late 1990s. Using a grant from the New York State Hudson Valley Greenway, the town hired the engineering/consulting firm Saratoga Associates to conduct a feasibility study, completed in 2003. The study laid out a potential three-phased project for the ROW trail, starting in the Village of Valatie and heading north through the Town of Kinderhook. The study also suggested the ROW trail be extended south into Stuyvesant and Stockport and thus laid the groundwork for the K-S-S feasibility study.
Widespread public awareness and education about a ROW trail did not begin until May 2009, the first public meeting for the three-phase Town of Kinderhook project. Thirty-five community residents were present at this meeting and expressed varying points of support and concern. Their primary concerns were loss of privacy, dirt bike and ATV use on the trail, safety and security, and the effect of development and maintenance costs on local taxes. The overall tenor of this meeting was largely positive, with attendees generally supporting the project.

OUTREACH FOR PUBLIC MEETINGS

To promote the two public informational meetings, Studio members held a series of meetings — independently and with local trails committee members — during the month prior to the first meeting. Together, they promoted the meetings through the following methods:

- A press release was sent to two print media news outlets and two online media news outlets explaining the project and urging the public to attend.
- Full page and quarter-page flyers were placed at local business, libraries, and civic buildings.
- Email invitations were sent to targeted list-serves that relate to trails or have wide distribution potential.
- The Town of Kinderhook mailed a post card to all town residents who live adjacent to the National Grid ROW, informing them of the meetings.
- Local trails committee members went door-to-door along the proposed trail routes to advise residents about the public meetings.

MEDIA RELEASE

Three Towns to Host Public Informational Meeting on Proposed Recreational Trail

The Kinderhook, Stuyvesant, and Stockport Trail Committees invite the public to an informational meeting to discuss a proposed public recreation trail along a National Grid right-of-way that connects the three towns.

The Kinderhook-Stuyvesant-Stockport Inter-Municipal Trail Project has scheduled the meeting for Monday, Oct. 21 at the Stuyvesant Falls Firehouse. An open house will be held from 6-7:30 p.m. to give residents an opportunity to view a presentation and receive information. The meeting will be held from 7:30 to 9 p.m. In addition to the presentation, there will also be an open forum for attendees to ask questions and voice their concerns.

Last year, the three towns jointly received a $10,000 grant from the Hudson Valley Conservancy to study how they might develop a recreational trail along the National Grid right-of-way. The trail would run from the Village of Kinderhook south, through Stuyvesant Falls, into Stockport and end at Brunswick. The project will initially focus on developing a trail along the east side of Kinderhook Creek, near the Van Alen House and back to the Village of Kinderhook.

The public informational meeting will give residents an opportunity to view detailed maps and photos of the proposed trail route. Residents are encouraged to attend and express their concerns.

For more information, contact:

Three Towns: Kinderhook, Stuyvesant and Stockport Inter-Municipal Trail Project:

Press Release:

Contact: Alanna Roberts, Coordinator, Kinderhook Trails
Phone: 518-732-2474

Email: alanna.m.roberts@gmail.com

Public Information Meeting

What: First public meeting to learn more about the inter-municipal trail study and receive public comments on the trail

Where: Stuyvesant Falls Firehouse: 6 Firehouse Rd, Stuyvesant Falls, NY

Date: Monday, October 25th, 2010

Time: Open House starting at 5:30 p.m., Public Meeting 7:00–8:00 p.m.

To Learn More: http://kbastrailstudy.wordpress.com/
KSS Trailway Survey

The Studio decided to prepare a community survey of the proposed trail project, knowing that most residents will not attend the public informational meetings. Survey topics covered overall interest, specific types of trail uses desired, respondents’ location in relation to the trail, and overarching concerns. The survey follows below:

1. In which town do you currently live?
2. Do you think a multi-use trail would be beneficial to the region?
3. What trail uses do you enjoy?
4. How often would you like to use the trail?
5. During which seasons do you plan to use the proposed trail?
6. If you own property adjacent to the proposed trails, what are your main concerns?
7. Would you like to learn more about the following (economically benefiting) trail opportunities?
8. Additional comments and an area for continued contact via email.

Although the survey was originally intended for distribution prior to the first public informational meeting, it was decided that survey respondents should fully understand the project. So, the survey was not distributed until the first public meeting, where attendees received full trail plan disclosure.
WEBSITE CREATION

Early on in the study, Studio members discussed the idea of developing a trail study website. The site was created by the communications Studio team member on a free host-site, Wordpress.com, with full image, text, photo, and video capabilities. The impetus for the website’s creation was initially as a host-site for the online survey, but the website quickly expanded to much more than that. The site currently serves as a storehouse for everything “public” about the trail including photos, video and responses from October 25th, survey poll results, background on the study, contact information for the Studio, and a platform for responses to the project. This site will certainly continue to be an integral element for the storage and distribution of information in all trail-related matters and long-term operations. The website is currently hosted at: http://ksstrailstudy.wordpress.com.
MEETING CONTENT AND PLANNING

The main purposes of the two public informational meetings were to present to local residents the consultant’s analysis of existing conditions on the proposed trail routes; answer residents’ questions, to the extent possible; and provide residents with a “listening session” during this very fluid portion of the trail planning process. The studio had also done a significant amount of research on historical and cultural connections between the trail route and the communities and the potential health and economic benefits of public trails. This research was incorporated into the public meeting presentations.

(Left) About 60 residents turned out for the first public informational meeting at the Stuyvesant Falls Fire House.
(Right) The meeting was preceded by an open house, where residents could view large-scale maps, photographs, and aerial photographs of the proposed trail routes and ask questions about the project.

PUBLIC OPINION

The first public informational meeting drew 58 local residents to the Stuyvesant Falls Firehouse on October 25, 2011. The event was arranged in an open house format, allowing residents to view maps, photographs, and other displays for an hour prior to the actual meeting.

The meeting presentation began with discussion about the importance of the proposed trail routes to local culture and history, followed by a review of field work and existing site conditions along the two proposed trail routes. The Studio Instructor, as well, provided some introductory remarks, give national context to trails and formally recognize the length of time often necessary to achieve public acceptance and support. It concluded with discussion about successful trail projects in other communities. A question-and-answer session followed.
Resident questions and concerns centered on the following areas:

- Loss of privacy. Comments ranged from “(not wanting the) public on my land” to the fact that the “no trespassing signs (already) do not work” to the likelihood that people would veer “off the trail and into their land.”

- Dirt bike/ATV/snowmobile use.

- Potential liability for adjoining landowners.

- Personal safety/presence of strangers near homes

- Potential impact on existing operations of farms along proposed trail routes.

- Incompatibility of terrain

- Uncertainty about how trail development and maintenance costs will impact local taxes.

When the audience was asked for a “show of hands,” roughly two-thirds of the attendees favored developing the trail.

The strongest and most vocal opponents at the meeting were several farmers whose lands border the ROW and who move their farm equipment across the ROW and up and down the ROW. Two farmers claimed they either owned the section of the ROW near their farms or held easements allowing them to use the ROW. Tax maps and existing documents indicate that National Grid owns the entire ROW, but this will have to be confirmed through title searches.

After the first public meeting, members of the Kinderhook Trails Committee had productive meetings with two farmers, walked the ROW near their farms, addressed their specific concerns, and discussed how the trail and farming operations could co-exist. Their main concerns were: personal liability for trail users who may go off the trails and injure themselves or provoke animals; sections of the ROW they deem unsuitable for trail use; use of pesticides and herbicides; and the need to use the ROW for moving equipment to their fields.

**SECOND PUBLIC INFORMATIONAL MEETING**

The second meeting was held Dec. 6, 2011 at the Stuyvesant Town Hall and followed largely the same format as the first meeting. Because several opponents were disruptive during the question-and-answer session at the first meeting, the format of this meeting was altered. To prevent this “us-versus-them” dynamic from developing, the second meeting included a question-and-answer session, then participants broke into smaller group discussions around specific sub-topics of the project. Small group discussion fostered more personal interaction and helped to focus discussion on specific resident concerns -- rather than allowing several residents to dominate a full-group discussion with generalized, and sometimes redundant, statements.
Similar to the first public informational meeting, residents’ concerns generally fell into the following categories:

- Skepticism about whether local law enforcement agencies could effectively patrol the trail system and keep motorized vehicles off the trails.
- Continued privacy concerns, especially among people who live in the residential areas along the ROW in the Village of Kinderhook and Town of Stuyvesant near Smith Road and Kinder Drive. Mild opposition to current (and anticipated) equestrian use.
- More questions by farmers about whether National Grid has full ownership of the entire ROW being considered for the project.
- Fear/uncertainty of criminal activity, trespassing, partying, and litter along the trails and the effect on nearby homeowners.
- Of a total of 14 survey respondents, 13 (93 percent) believed the trail would be generally beneficial to the region. Other results from the survey include 67 to 83 percent of respondents expressing interest in economically beneficial trail related programs -- such as “tax breaks”, “economic development” mechanisms, and “trail-oriented businesses” -- and 57 percent said they intended to use the trail “multiple times during the week.”

RESULTS OF SMALL-GROUP DISCUSSION

Following the question-and-answer session, attendees could circulate to stations (tables) that focused on the following sub-topics: Existing Conditions & Schematics; Cultural & Historical Connections; Local Economic Development; Cost Estimation & Maintenance; and Addressing Trail Concerns. At every table, representatives from the Studio and the local trails committees engaged participants and answered questions. This direct, personal interaction in a small-group format helped to keep the conversation civil and focused on facts. Table discussion generated the topical areas:

Existing conditions: Residents expressed the need for considerable safety infrastructure and ways to restrict vehicular access through gates or bollards.

Cultural and historical connections: Participants were very familiar with the history of the Albany & Hudson Railroad in particular and were eager to discuss and share stories. They supported the idea of the trail highlighting the unique historic characteristics and resources of the three communities.

Local economic development: By highlighting the unique cultural attributes of these communities, the trail system could spur the development of attractions tied into local history and culture — not just farm stands or bed-and-breakfasts.

Addressing neighbors’ concerns: Some participants suggested a trail “hotline” to report problems regarding the trail (e.g., vandalism, misuse). Concerns were again raised about potential land ownership disputes around the ROW — i.e., several farmers claimed they owned parts of the ROW or held easements to it. Land surveys and title searches will be conducted to conform that National Grid owns the entire ROW.
LANDOWNER CONCERNS DOCUMENT

It was clear that the public did not universally support the proposed project; much education and outreach are needed. While some residents’ fears and concerns are valid, there is also a great deal of misinformation about the trail, especially surrounding the potential legal liability for several farmers whose land abuts the ROW.

The project consultant developed a fact sheet to address various landowner concerns and dispel misinformation about the proposed project and public trails generally. This document relies heavily on Getting Involved: A Community Trail Handbook for Landowners, a joint publication of the Hudson Valley Greenway Conservancy and the advocacy group Parks & Trails New York. The handbook is an excellent compilation of information and advice concerning landowner issues, the community benefits of trails, and how to educate the public and allay their fears and concerns. Copies of the handbook were made available to residents at the town public informational meetings.

Addressing Common Landowner Concerns

Following our public meeting we understand that many landowners remain concerned about liability, vandalism, litter, privacy and other management issues. Experience and numerous studies have shown these issues to be more perceived problems than actual problems. Your local trail committee and the SUNY Albany Studio Team wants to work with you to plan, build and manage a trail that minimizes problems and maximizes compatibility with your use of your land.

Issues and Facts:

Issue: A trail is not the type of “neighbor” that I want next to my land.

Fact: Trails make good neighbors! Studies documenting actual experiences from around the nation and New York State demonstrate that well-planned and designed trails can be good neighbors and that living with trails can be highly rewarding.

- In a 2008 survey of residents along the Mohawk Hudson Bike-Hike Trail the majority of respondents reported being satisfied with the trail as a neighbor. [Survey results follow the Issue/Facts section]

Issue: I do not want any added liability because a trail is adjoining my land. Am I expected to be sued if someone gets hurt on my property? Can I be sued? Does my insurance cover this?

Fact: Your concern for liability should be one of your major questions. Luckily mechanisms exist in New York to protect landowners. New York’s Recreational Use Statue (NYS General Obligations Law subsection 9-403) limits the liability of landowners who voluntarily allow access to their land for certain recreational activities. These recreational activities include the most common trail activities such as...