



# **Village of Croton-on-Hudson Bicycle/Pedestrian Master Plan**

**April 20, 2009**

Prepared by

**The Village of Croton-on-Hudson Bicycle/Pedestrian Planning Committee**

for

Village of Croton-on-Hudson Board of Trustees

## **Board Members 2006-2009**

Gregory Schmidt, Mayor

Thomas Brennan

Ann Gallelli

Susan Konig

Richard Olver

Charles Kane

Leo Wiegman

## **Board Members 2009-2010**

Leo Wiegman, Mayor

Ann Gallelli

Ian Murtaugh

Demetra Restuccia

Richard Olver

*Special thanks to Bicycle/Pedestrian Planning Committee (BPC) Liaison to the Board of Trustees Ann Gallelli, former Mayor Gregory Schmidt and the Board of Trustees and Village staff, Mayor Leo Wiegman, former Mayor Robert Elliott, Kevin Davis, Village Manager Abraham Zambrano, Assistant Village Manager Janine King, Village Engineer Daniel O’Connor, former Village Manager Richard Herbek, Charles Komanoff and others who have laid the pavement for the Bicycle/Pedestrian Master Plan initiative.*

**Bicycle/Pedestrian Planning Committee**

Josh Moreinis, Chairman

Ann Gallelli, Liaison to the Board of Trustees

Joseph Biber

Justin Casson

Jeremy Goldsmith

Karen Moy

Robert Olsson

**TABLE OF CONTENTS**

**I. Introduction & Mission Statement ..... 2**

**II. The Vision/Croton Futures ..... 2**

**III. Master Plan Recommendations ..... 2**

    A. Commutation ..... 2

    B. School Access ..... 2

    C. Neighborhood Connectivity ..... 2

    D. Bicycle Promotion and Public Education ..... 2

    E. Other Improvements..... 2

**IV. Implementation..... 2**

    Figure 1: Croton Point Avenue/South Riverside Avenue Conceptual Plan..... 2

    Figure 2: Existing and Proposed Bike Routes ..... 2

## I. Introduction & Mission Statement

The following Bicycle and Pedestrian Master Plan for the Village of Croton-on-Hudson provides advisory recommendations to improve bicycle and pedestrian safety and conditions, and to promote non-motorized means of travel in the Village of Croton-on-Hudson and its environs. It was developed through outreach conducted in 2006 and 2007 by the Village's Bicycle/Pedestrian Planning Committee (BPC) that identified critical issues and preliminary suggestions for improvements, as well as through input of Village staff, Board of Trustees, and a traffic consultant hired to examine the Village's most trafficked district. An accompanying report with a listing of issues and opportunities has also been prepared.

A Mission Statement for the BPC was developed at one of several public workshops held to collect concerns and ideas about bicycle safety and promotion and improving conditions for pedestrians using village roadways. The following Mission Statement guides the actions and recommendations of this Master Plan.

**To maintain and improve the quality of life and safety of those who walk, ride bicycles and rely on non-motorized means of travel in the Village and its immediate environs while preserving the organic network of Village roadways and historic Village sidewalk system, and to promote a long range plan for access improvements for commuters, shoppers, students, and biking enthusiasts, both for the health and welfare of our citizens, workers and visitors, and for the environmental and economic health of our Village.**

## II. The Future Vision

The future vision of the BPC for the Village of Croton-on-Hudson is one where residents and visitors have safe access to our Village's destinations on foot, by bicycle, or by rollerblading. Shopping and service destinations should be accessible by sidewalks, and with adequate bicycle parking facilities available, and should be safely linked to public transit, including the Croton-Harmon Station. Bicycle facilities should be available for commuters, including both seasoned cyclists and those with less experience or riding skill, and families should be able to use all roads for shared rides. The vision includes a 21<sup>st</sup> century mindset for travel in the village and region where health, environmental and energy conservation objectives merge. Environmentally friendly and recycled products can increasingly be used for roadway improvements. The vision includes a much higher proportion of residents commuting to the Croton-Harmon station, traveling to school, shopping, and traveling between neighborhoods, and accessing parks using non-motorized means. This vision is summarized in the committee's motto, "greater connectivity through safe access."

## III. Master Plan Recommendations

The master plan recommendations include both short term actions such as enforcement and low budget improvements to the Village's roadways to improve pedestrian and bicycling safety, as well as long term measures including capital improvements funded through state and other grants as well as Village

funding, and facilitating roadway improvements through the site planning process and through regular events and educational programming, such as Bike Week, which was begun in September 2008. The map on the following page shows existing and suggested bicycle routes for the Village of Croton-on-Hudson, with roadway improvements proposed for the Croton Point Avenue and Riverside Avenue corridors, and designation of preferred routes only for other streets where roadway widths and other factors may preclude construction or marking of bicycle facilities.

Critical safety locations identified by area residents in the Master Plan outreach process have been inventoried in an Issues and Opportunities Database (available upon request). The recommendations are described below, organized by the five functional areas addressed in the Bicycle/Pedestrian Planning Committee's outreach meetings. These subject areas include commutation, school access, neighborhood connectivity, recreation, and educational/promotional efforts. Recommendations represent advisory options for short and long term improvements that can be implemented over the long term, subject to funding availability and further detailed studies in some cases.

### ***A. Commutation***

Bicycle and pedestrian issues affecting commuters in the Village of Croton-on-Hudson primarily relate to access to the Croton Harmon Metro-North Railroad Station. Village residents benefit from express train service on Metro-North, although regional transit access also brings regional traffic to our local roadways. As a result, the station area has unique challenges related to pedestrian and bicycle safety that can potentially be addressed through roadway improvements, enforcement, and local policies related to parking.

One of the hot spots for conflicts between pedestrians and motorists is the southbound Route 9 highway exit ramp, where expanded crossing guard coverage has assured pedestrian safety during certain peak commutation periods. Other crossings of South Riverside Avenue at Benedict Avenue and Croton Point Avenue experience heavy traffic that can be intimidating for those accessing shopping at Shoprite Plaza, or the Harmon residential area. Physical improvements implemented by the Village in this corridor have included replacement of bike tire-unfriendly storm grates, installation of pedestrian activated crossing signals, and improved roadway markings. Other solutions raised during BPC outreach meetings included use of variable message signage at the southbound highway ramp to say "Yield to Ped" or some other such message to alert motorists to the fact that this is a heavily used pedestrian route. Improved lighting is recommended, particularly below the highway overpass but throughout the corridor in general, along with signage promoting sharing of the road with cyclists and pedestrians. The main capital improvement envisioned for this area as part of the master planning process is construction of a multi-use path with dedicated lanes for cyclists and pedestrians for two-way travel, to be constructed on the north side of Croton Point Avenue to avoid conflicts with multiple highway access points on the south side of the avenue. Bicycle lane markings, or newly installed sidewalk, are recommended for the south side of Croton Point Avenue subject to available right-of-way width, and topographic constraints. Sidewalk neck-downs and other design solutions to promote traffic calming are also recommended, along with a traffic speed hump at the entrance to Croton Point Park, a critical station access roadway crossing for pedestrians that is in a location where motorists accessing work sites regularly exceed the posted 25 mile per hour speed limit.

Another key issue for this corridor is pedestrian access to ShopRite plaza, now provided only by walking down the entrance roadway to this major shopping destination. The possibility of formalizing hillside paths now informally utilized, through openings of the barrier on Croton Point Avenue at certain points and working with property owners to allow workers and shoppers better site access. In the long term,

the site plan approval process may prove to be beneficial in facilitating a reconfiguration of site access, with one-way in/one-way out drives allowing installation of much needed sidewalks within this privately owned site.

A 2008 consultant study led by The RBA Group confirmed the recommendations described above and used traffic simulation and modeling to project future conditions with and without major improvements. New traffic signals at the highway access points on Croton Point Avenue are also recommended in the RBA Group plan. Focusing bicycle access on the north side of Croton Point Avenue would address several levels of cycling proficiency and optimizes use of limited existing right-of-way width. In addition, changes to the Route 9A northbound cloverleaf entrance ramp are proposed to make this highway entrance at its intersection with Croton Point Avenue more of a right turn, to limit the possibility of vehicular-pedestrian conflicts there. (See Figure 1, Croton Point Avenue/South Riverside Avenue Conceptual Plan, at the end of this plan report.)

The outcome of a 2008 state grant application will determine the extent of improvements that can be implemented around the Harmon Station without primarily relying on Village funding. Should state grant monies not be available, a staged approach to implementing the improvement program for Croton Point Avenue should be considered, starting with low budget measures such as improved crosswalk markings and raised pavement traffic calming improvements, Variable Message Sign warnings, increased enforcement, lighting improvements, and signed and marked bicycle lanes. In the long term, roadway reconstruction is recommended to create the two-way, multi-use path on the north side of Croton Point Avenue and potential sidewalk on the south side of the roadway. Traffic lights and sidewalk neckdowns that restrict motorist movements around key pedestrian crossings should also be implemented as part of long term capital improvements, relying on a mix of state or federal grants and local funding. The possibility of creating a highway exit that extends directly into the station parking lot is something that can be considered as a long term strategy should federal funding be available, though spacing between the existing and new ramps would require engineering studies and capital intensive improvements.

To improve crosswalk safety, particularly in the AM commuting period at the southbound Route 9 exit ramp, recommended options include increased enforcement (possibly with posting of police cars periodically from 7:10 to 7:40 similar to use of posted police vehicles at the upper station parking lot) and the previously mentioned use of a variable message sign at the exit ramp with the words "Yield To Ped."

Lastly, at a policy level, the Village can consider promoting cycling and walking to the train station with an incentive program called "Bike Checks." Under such a program, cyclists could get vouchers for vehicle parking during weekends or days of inclement weather, based on the number of times they cycle to the station.

Recommended pedestrian amenities should also focus on improving the environment for transit users in this corridor. One specific need is for a bus shelter to serve Westchester County Bee-Line buses at the intersection of Croton Point Avenue and South Riverside Avenue, where a bus stop currently exists with no provisions for shelter or seating. Although specific location or design solution is not proposed at this time due to right-of-way width constraints at this location that limit options for where a new bus shelter can be installed, in the long term the Village should work with the County's Bee-Line bus system and local property owners to achieve a solution to this issue.

Longer term solutions for improving safe access and connectivity to the Harmon Station include potential construction of a new path alongside Route 9A just north of Croton Point Avenue could also be explored as a different way of connecting Municipal Place or the Harmon neighborhood to the station area. Another potential long term project involving major capital costs that could be explored with New

York State Department of Transportation would be a direct highway ramp to the station that would remove this area's major conflict points between pedestrians and regional traffic accessing the station. A lack of compliance by some motorists with stop signs (e.g., at the Route 9 southbound exit ramps), illegal parking, and speeding are problems that need to be addressed through immediate and mid-term actions over the next three-to-five years, as well as potential long term measures that might have longer implementation timeframes such as a new highway exit ramp or multi-use path alongside the highway that would extend the "Crossing" path that now connects to Ossining over the Croton River.

### **Summary: Commutation Recommendations**

1. Address safety issues at southbound Route 9 highway exit ramp on Croton Point Avenue.
2. Address safety issues for pedestrian access to the ShopRite Plaza at Croton Point Avenue and South Riverside Drive.
3. Provide east- and west-bound bicycle access with a multi-use path on the north side of Croton Point Avenue and redesign the northbound Route 9 cloverleaf entrance ramp.
4. Consider a staged approach to implementing the improvement program for Croton Point Avenue starting with low budget measures such as improved crosswalk markings, raised pavement traffic calming improvements, or enhanced rush hour enforcement.
5. Explore a "Bike Checks" incentive program, in which bicycle commuters earn points toward a vehicle parking pass for use in inclement weather or on weekends.
6. Explore pedestrian improvements for transit users in this corridor, such as bus shelters, and other methods of facilitating intermodal transit.
7. Examine longer term solutions for a reflowing the vehicle traffic access from Route 9 and 9A to the train station such as a new highway exit ramp or multi-use path alongside the highway that would extend the "Crossing" bike/ped path further north from Croton Point Avenue up to Elliott Way.

## ***B. School Access***

One of the goals of the BPC is to help create safer routes for school children. By implementing traffic calming and physical improvements, and undertaking educational and enforcement programs, the Village can encourage its households and their children to bike and walk to school safely. Along with benefits related to the health of students and environmental benefits from removing cars from the roads during rush hour periods, this could also have significant benefits related to reduced traffic in the vicinity of schools, since many parents drop-off their children by car. Generally, children in 4<sup>th</sup> grade and higher should be able to ride to school (the minimum age for "walkers") but should be required to take a safety course with the Police Department first. Safe routes to school and helmet use should also be promoted.

Establishing safer routes to the Village's school can involve a number of key intersection improvements and changes to the Village's roadway network at priority locations near Pierre van Cortlandt Middle School and CET Elementary School.

Access between the schools and neighborhoods to the north of Maple Street could be improved with safer pedestrian crossings of Maple Street at Van Cortlandt and Olcott Avenues. To improve access to PVC Middle School, construction of sidewalks is recommended along Olcott Avenue between Wells Avenue and Glenn Place, along Larkin Place between Olcott Avenue and the PVC Middle school, and on Croton-Harmon School District property. Evaluation of sidewalk neckdowns (bulbouts) at the Olcott/Maple Street intersection is also recommended as a traffic calming measure and to create a safer crossing of this busy roadway.

Village-wide physical improvements to foster safer school access include installing new sidewalks, adding bike lanes, providing bike racks and adding pedestrian crosswalks as described elsewhere in this Plan. Areas that would benefit from installation of sidewalks and crosswalks include paths around the village that school children use every day. Through the public outreach program, some residents have suggested improved pedestrian crossings at Cleveland Drive and Park Avenue; Cleveland Drive at the Library; on Olcott Avenue and Maple Street, and between shopping plazas on Maple Street. Potential improvements should be explored that are both sensitive to neighborhood character and feasible from a cost perspective. Other recommendations from the public included installation of sidewalks along Van Cortlandt and Olcott, and along Cleveland Drive approaching Gerstein Place. These locations may be appropriate for improvements subject to availability of resources. The Village should work with the School District and the New York State Safe Route to Schools program to formulate a comprehensive school access safety program, and to fund improvements.

Another type of physical improvement that should be explored both in the short term and long term is calming traffic on streets where there is a need to reduce or slow down traffic. Methods can include speed humps, new stop signs, and increased enforcement efforts. Traffic calming helps pedestrians and bicyclists feel more safe and increases driver awareness of pedestrians. Areas of concern include Cleveland Drive and Route 129 near Olcott, among others. At the Library, where a marked crosswalk has been installed, a slightly raised pedestrian crosswalk with brick pavers several feet wide within a wide double stripe could provide an appropriate, highly visible traffic calming measure while being sensitive to neighborhood character.

Related to traffic calming is the problem of traffic congestion around schools. Schools are particularly vulnerable areas at morning drop-off and afternoon pick-up periods. Methods can include improving areas where sidewalks are missing or are in poor repair so more children can walk, encouraging more bus use if children are on the bus route, redirecting the flow of traffic, and clearing brush and overhanging bushes and trees from sidewalk areas.

Croton and other school districts have started education programs to promote walking and bicycling. These programs include: walk to school week (in Hastings on Hudson) or walk to school day (in Valhalla), a "walking school bus," school safety patrols and crossing guard programs and classroom activities. These are programs that Croton schools can adapt and build on through the efforts of the Village and the School District. Educational and promotional events have been undertaken as part of Croton Bike Week in September 2008, providing an example of how Village businesses, residents and the School District can work together to actively promote cycling and walking as an alternative means of transportation.

Increased traffic enforcement efforts should also be explored to improve roadway safety for children that are walking and bicycling. This can include increased enforcement to reduce speeding and illegal maneuvers near schools.

Other specific roadway improvements directed toward school access safety improvements, Van Cortlandt Place could be explored as part of a one way traffic triangle to allow for safer access for pedestrians to the Middle School. If Van Cortlandt were one way, it could be narrowed, allowing space for sidewalks on one or both sides, neither of which currently exist. This could potentially extend to the one block section of Olcott that runs adjacent to the Middle School, where there are also currently no sidewalks. The extension of sidewalks to CET Elementary School can also be considered, particularly on Cleveland Drive to the south of CET elementary School.

Creating safer routes for our school children is a priority. Not only will it protect those who walk and bike, but it will create a cleaner and healthier environment.

### **Summary: School Access Recommendations**

1. Examine safety improvements at key intersections for Pierre Van Cortlandt Middle School and Carrie E. Tompkins Elementary School.
2. Examine Village-wide physical improvements to foster safer school access include installing new sidewalks, adding bike lanes, providing bike racks and adding pedestrian crosswalks.
3. Explore calming traffic on key streets with methods such as speed humps, new stop signs, neckdowns, and increased enforcement efforts, especially areas of concern such as Cleveland Drive and Route 129 near Olcott, among others.
4. Examine educational and promotional events to reduce traffic congestion around schools during drop-off and pick-up times, for example, with “Walk to School” days, or “a “walking school bus” program.
5. Examine the use of one-way streets near the schools to calm traffic and create safer crossings.

## ***C. Neighborhood Connectivity***

A key concept of this master plan is greater connectivity through safe access. Several critical locations have been identified for potential long range improvements related to pedestrian connectivity (see below). In the future as implementation of master plan recommendations proceeds, other focal areas of the Village can be addressed through detailed improvement strategies, particularly intersections and roadway linkages that serve to connect the various neighborhoods of the Village for pedestrians.

Figure 2, found at the end of this plan report, is the Village of Croton-on-Hudson Existing and Proposed Bicycle Routes Map. As shown in Figure 2, Croton Point Avenue and Riverside Avenue are proposed for physical roadway improvements such as the separated multi-use path on the north side of Croton Point Avenue, marked bike lanes and traffic calming measures. Other roads that may not have sufficient right-

of-way width to accommodate bike lanes -- but that serve as existing routes that connect major recreational, school, shopping and other destinations and that connect neighborhoods -- are designated to be recognized as part of a hierarchy of bike routes proposed to create an overall system connecting major destinations in the Village. Measures to improve conditions for cyclists on those roads, such as bicycle and pedestrian safety signage, or potential roadway markings, should be considered in the future. (See Figure 2: Existing and Proposed Bike Routes.)

## **Maple Street & Three Shopping Centers**

The Village has continued to improve pedestrian conditions along the Maple Street corridor with a 2007 sidewalk and curbing improvement project, the Maple Street Improvement Project, and construction of new sidewalk on Municipal Place, pursuant to Comprehensive Plan recommendations. Additional Comprehensive Plan recommendations for the Maple Street Corridor should be implemented, including better connectivity between area shopping plazas. The BPC recommends extending the focus of the Comprehensive Plan's recommendations further to the north on Maple Street, where the previously described crossing of Olcott and Van Cortlandt Place requires improved safety features such as crosswalk markings, neckdowns, or combinations of these and other traffic calming measures. In the short term, clearly marked crossing and use of temporary plastic bollards or other traffic calming measures should be explored and utilized if appropriate. Students in the morning commutation period often cross away from the crossing guard-assisted crossing of Maple Street further to the north. Safety solutions should also be explored for the constrained travelway and side parking present along Maple Street that present difficulties for cyclists and roller bladers accessing the Upper Village. Sidewalk construction is needed for a missing stretch of sidewalk between Dom's and Auto Park, adjacent to the Croton Commons Shopping Center.

## **Traffic Circles**

The modern roundabout has recently been used to improve traffic operations of intersections of multiple roadways, including in the Town of Cortlandt. Improvements that could be studied at some of the Village's existing traffic circles include additional yield signs, median and sidewalk neckdown improvements, and potentially raised and planted medians in the roadway where broad expanses of pavement exist. These measures can "calm traffic" and enhance ease of crossings for pedestrians. Roadway improvements consistent with modern roundabout designs should be considered in the long term on a selective basis as a way to calm traffic in areas where there is ample travelway to accommodate such facilities, subject to the availability of funding for this magnitude of capital improvement.

## **Bike Racks**

Installing bicycle racks at key destinations is an important part of promoting cycling and connectivity via cycling. Racks enable residents to use their bicycles to shop, ride to school, commute and participate in sporting events, knowing that their bicycles will be secure while unattended. They are a relatively low cost piece of equipment that if strategically placed throughout the village will create a range of cycling opportunities.

At schools, secure racks that are conveniently located and in surveillance range will encourage the use of cycling to school. Racks can also be used by teachers, staff and adult visitors. The school district should consider installing a rack in the parking area by the District Office Building to serve CET students and cyclists using the new tennis courts or Spencer Field (CET elementary school used to have a rack by the front swings, but removed it many years ago in response to a bike theft).

## **Commercial Districts**

Light shopping and access to services by bicycle should be encouraged as an option for residents. The owner of the Van Wyck Shopping Plaza installed a ribbon rack under an unused sheltered space, providing a valuable amenity for the users of this plaza. Other racks are needed in the Village's key commercial shopping districts.

The Village should continue to try and encourage property owners, such as for the Croton Commons center, to locate bike racks in prominent locations, and should consider alternate sites for a rack in the Maple Street vicinity, possibly using Village-owned land (with the possibility of studying locations such as the strip of grass along Riverside abutting Croton Commons).

The Upper Village shopping district is a bit more challenging for locating racks. Wide sidewalk locations where racks would not block pedestrian flow should also be considered as rack locations. Vassalo Park is another option, though it is less public and visible, and does not have as good access to shopping. Installing temporary racks in curb-side parking spaces is another option.

Rack locations are also needed for shopping in the South Riverside district.

## **Parks, Playgrounds and Sports Fields**

The Village Parks and Recreation Department installed a rack in Dobbs Park, so most well-used parks, playgrounds, and ball fields are now covered. Bike racks should be included in the plan for renovating Croton Landing, since there will be active bike use of the new path.

## **Croton-Harmon Train Station**

The bike rack that is now at the front entrance could be upgraded to a ribbon rack and the motorcycle and scooter parking could be separated from the bike area (through pavement markings). There are currently racks under the south stair entrance, which is sheltered by the staircase.

## **Other Destinations**

Municipal Building: Since the Village now has a new teen recreation center, it could consider upgrading the bike rack in the parking lot to a ribbon style rack and offer more spaces. This could also be used by adult visitors doing business at the building.

## **Library**

The Croton Free Library has a rack, which contributes to the BPC's goal of neighborhood interconnectivity. When a replacement rack is needed in the future, a ribbon-style rack may be appropriate as an updated model to best accommodate different wheel types, such as mountain bikes.

The Village may wish to combine orders for bicycle racks with the school district, library and others in order to get improved pricing. Appropriate signage should be placed at and near the racks so that their availability is evident.

### **Summary: Neighborhood Connectivity**

1. Improve connectivity between area shopping plazas.
2. Examine potential traffic calming improvements for the Village's existing traffic circles.
3. Install more bicycle racks at key public destinations: train station, library, schools, among others.
4. Encourage commercial district property owners to expand bike rack locations.

### ***D. Bicycle Promotion and Public Education***

In order to encourage the wider use of bicycles in the Croton community, the Village could engage in the promotion of bicycling and public education directed at both school-age children and adults. Working with the Village, the school district could promote wider use of bicycling to school, to address global warming, local environmental quality, and public health. Croton Bike Week, initiated in September 2008 with events, merchant discounts for cyclists, and school programs, should continue on an annual basis and should be coordinated with the schools.

The first Bike Week 2008 event entailed a week of promotional and educational events timed to coincide with several regional cycling events in Croton. In the future, Bike Week, with its merchant discounts for cyclists, could be considered as a celebration of both a biking and walking, or other alternative means of transportation.

## Promotion of Bicycling

### *Croton Harmon District Schools*

The Village may wish to approach the School District and jointly develop techniques for promoting bicycle use (and pedestrian activity) for school-age children. The main focus would be on promoting bicycling to school (for Grades 4-12) and encouraging walking to and from school. There are a number of possible ways that this can be done, either now or in the future, including:

- Flyers in backpacks;
- Announcements at schools;
- Convenient bike parking;
- Health class (pointing out health benefits of walking/biking);
- Recommend safe routes; and,
- Improved cross-walks (see section in report on schools and key cross-walk recommendations).

In addition, educational efforts in the schools are needed to ensure proper use of sidewalks for cycling by students so that pedestrian conflicts are avoided.

### *Village Government*

The Village can also directly promote bicycle use in the community in partnership with the BPC, including the following:

- A Bike Checks program should be explored to provide a financial incentive for commuters to switch to cycling from driving.
- “Shop-by-bike” or “commute-by-bike” campaigns such as Bike Week;
- Recreation Department sponsorship of bike repair workshops and cycling events;
- “Consider Croton” campaign: Target NYC road bikers, who otherwise go to Nyack, to take the train to Croton Harmon Station; can also help economic development (local shops); design map and website;
- Racks/Signage/Bike Lanes: The presence of racks, signs and bike lanes in and of themselves would help to promote bicycling, particularly the placement of bike racks in convenient and popular locations (e.g., the new rack at Van Wyck Shopping Plaza); and,
- Commuters -- Better/safer access to the train station will help promote bicycling for commuters. The Village may want to advertise the changes in its newsletter and website as well.

### *Cycling Events*

Organizing local events like road races or mountain bike competitions would help promote cycling and help develop Croton’s reputation as being bike-friendly. While they have limited resources to commit to

advertising and events budget, local bike shops could be part of the effort. Bicycle manufacturers could potentially be approached for corporate sponsor involvement.

## **Public Education on Bicycling**

Public education related to bicycling will serve to reinforce the goal of promotion. Promotion of biking to school should include safe routes, safe bicycle handling, proper maintenance, as well as encouraging helmet use.

### *Bicycle Safety/Training Courses*

The Village could consider working through the Croton Police Department to initiate a bicycle safety and education program for young bike riders. This is currently offered in many neighboring communities, including Ossining, and is modeled after the programs that suburban communities offered during the 1950's and 1960's. It can include lessons on safe riding, registering bikes, repair workshops and sharing literature on bike safety.

### *Safe Routes to School*

The National Center for Safe Routes to School ([saferoutesinfo.org](http://saferoutesinfo.org)) is a resource for organizing a local program in Croton. Its website indicates that the Center offers a centralized resource of information on how to start and sustain a Safe Routes to School program, case studies of successful programs as well as many other resources for training and technical assistance. Funding through the Safe Routes to School program should continue to be pursued by the Village and School District, with an initial focus on the Maple Street environs as described above in Section VII.

There are also potential public education programs directed at pedestrians, linked to the public health benefits of walking. Westchester County and Croton sponsored a river walk on the Hudson riverfront recently to promote and educate the public on the benefits of walking as an exercise.

### *Bike Repair Workshops*

Another form of education would be offering workshops on bicycle maintenance and repair for children and adults. This could be sponsored by Village Recreation Department, Police Department or the School District for school-age children, and by the Continuing Education program for adults.

#### **Summary: Bicycle Promotion and Public Education**

1. Target the school age population for increasing “bike to school” opportunities.
2. Target the adult population for promotion of bicycle use in the community to shop, commute, etc.
3. Target general population with special cycling events, repair workshops, bike training, etc.

## ***E. Other Improvements***

The advantages of outdoor aerobic activity are well documented: a healthier population, less time spent indoors, less electricity used, more walking/biking, less driving, less pollution. An important objective of the BPC is to find ways to promote and facilitate recreational cycling and walking by village residents. An additional objective related to recreation is to find ways to attract visitors by making Croton a destination for bikers and hikers from outside the village. Encouraging recreational walking and bicycling can be achieved through both infrastructure and administrative measures related to safety, connectivity improvements, and public outreach and education as described below. These would also foster better safety and access for the other topics covered in this master plan such as commuting and schools.

### **Safety**

Many of the concerns expressed by attendees of the BPC public outreach meetings involved safety issues caused by a variety of conditions in the village.

### **Roadway Conditions**

Road patches and conditions during construction activities can be hazardous for cyclists. Debris on the road surface can also be a problem. Maximizing safety for cyclists should be a continued consideration during roadway repair operations.

### **Sidewalk conditions**

Sidewalk conditions have improved as a result of the Village's sidewalk construction program. However, some village sidewalks are still in disrepair, causing pedestrians to walk in the street. Residents and/or businesses who have not participated in the sidewalk program could be encouraged to do so, or be required to effect adequate repairs to their sidewalks on their own.

### **Illegal parking on sidewalks**

Many village residents do not have ample parking, whether in garages, driveways, or on-street. Sidewalk parking is a problem that is often overlooked. It must be addressed to ensure that pedestrians have an uninterrupted travelway and to avoid vehicular conflicts.

### **Vegetation**

Overgrown hedges, bushes, and low-hanging tree branches can be major safety concerns for pedestrians and bikers on village streets, especially in the evening or early morning. Where appropriate, residents and businesses should be asked to cut back these hazards, and in other areas the village should oversee such maintenance, or undertake it as necessary where the public right-of-way is involved.

### **Lighting**

For evening strollers and bicyclists, seeing where you are going can often be a challenge. Streetlights that are often out of service create dark patches that can be hazardous. The Route 9 overpass could benefit from improved lighting. A neighborhood-by-neighborhood survey of lighting conditions could reveal areas for lighting improvements.

## **High Volume Roadways and Pedestrian Safety**

As a result of increasing congestion in Westchester and Metro-North ridership, some of our village thoroughfares now carry a very high volume of vehicular traffic, most notably Maple Street and Croton Point Avenue leading to the Harmon Station and Croton Point Park. Walking and cycling access to Metro-North can play a positive role in local property values and in attracting future residents that wish to commute using non-motorized means. Shared bicycle/pedestrian paths, traffic calming measures such as neckdowns, speed limits and speed humps or rumble strips and other measures can greatly increase pedestrian and bicycle safety, and would encourage people to take advantage of area recreational possibilities without having to drive to them. Crossing guards have been added for the Route 9 southbound exit ramp at peak commuting times in the morning, and the continuation of this program, even intermittently, will help to educate drivers and prevent illegal incursions into the crosswalk when pedestrians are crossing. Consideration should be given to extending the hours that the guards are posted, such as covering peak commute times starting at 7 AM rather than 7:30 AM.

## **Greenway Connectivity**

Much has been done in recent years to provide recreational users more routes within, as well as into and out of, the village. Examples include the bike/ped path along state Rt. 9A into Ossining, the paved path from Croton Point Park to Senasqua running between the railroad and Half Moon Bay, and Elliott Way. Other areas of the village and some gateway areas could be studied for additional measures. The Village should continue to work with Half Moon Bay to improve its required public access walkway.

Improved connections to regional bikeways, and support of planning efforts for those regional facilities, such as the Hudson River Valley Greenway, should also be considered as a way for the Village of Croton-on-Hudson to promote cycling as a sport and as a means of connecting communities. Improvements to bicycle safety on Route 9 going north would help to connect Village residents to shopping just beyond the Village line in the Town of Cortlandt.

## **Connectivity to the North**

To provide a more welcoming connection to and from Cortland, Peekskill and beyond, Rt. 9 from the lower village north to the A&P shopping center could be looked at for shared bike/ped paths, better sidewalks. Short term traffic calming measures that can be explored include making this roadway more inviting for the recreational biker/walker.

## **Connectivity to the East**

Route 129 is our main gateway to the eastern parts of Westchester County, yet the width of this roadway and through traffic limits greater use of this roadway for cycling. Sidewalks and streetlamps do not begin until Harrison St. on one side and not on both sides until well after Grand Street. Traffic calming could be considered for stretches near Jacoby, Wood Rd., Batten/Eklof, and along residential areas. Some recreational walkers and bikers in these neighborhoods are now effectively cut off from the village.

As Rt.129 is a state highway, much of what is needed is under the purview of NYSDOT. The state has shown willingness to work with municipalities on these kinds of efforts. Possible solutions to make this a more welcoming and safe gateway for recreational bikers/walkers that can potentially be explored include:

- Early neckdowns approaching the village center and other measures to encourage slower speeds (back as far as Dailey Dr.), in addition to signage to slow traffic.
- Streetlights and sidewalks beginning further back as well, instead of just white lines and guard rails.
- Designated shared bike/ped paths where room allows. Ideally, a shared path along 129 would run all the way out to the New Croton Dam road, providing safe access for non-motorized transportation out to that marvelous landmark. Even more desirable would be bike lanes on both north and south sides of Route 129. Such a project would require extensive cooperation between the village, the town, and the state.

### **Quaker Bridge, Quaker Ridge Area Improvements**

Because of the nature of Rt. 129, Black Rock Park and the Quaker Bridge/Teatown area are not easy to reach from the village proper by bicycle or on foot. One solution that was discussed is development of the existing steep dirt trail from the Croton Gorge Trail to Quaker Bridge Road adjacent to the bridge itself. This would create a direct route from Truesdale Ave., past Silver Lake and down to the bridge, connecting up that entire area to the village. The trail would be steep, and a feasibility study would have to be conducted to examine potential options give the slope constraints present. Trail improvements could be considered if environmental impacts of construction and long term soil and erosion impacts can be mitigated, providing a major asset to Croton's recreational connectivity.

### **Recreational Public Outreach and Education**

Outreach and public education measures are covered elsewhere in this plan. Recreation-specific ideas and suggestions include:

1. A designated bicycle "Loop around Croton" could be established, and maps of it as well as other bike friendly routes around town could be made available to the public.
2. Annual community events could be held, such as a bike fair, or Bike Week, the focus of which could be a group ride around the Loop or other recreational events. This could be an ideal event to feature bike workshops centering around repair, safety, and might allow an opportunity for local vendors to feature bike-related merchandise.
3. Permanent, weatherproof laminated maps of Croton's Loop as well as other major bike and pedestrian routes could be posted at all bike racks, and at other strategic locations around the village.
4. Addition of plaques to Village gateway signs indicating "Bike Friendly Village," with a cycling symbol.

### **Summary: Other Improvements**

1. Address sidewalk and roadway safety issues such as unsafe sidewalk and roadway conditions, illegal parking in bicycle/pedestrian rights-of-way, overgrown vegetation, and poor lighting.
2. Improve the village's connections to regional bikeways and devise 'wayfinding' measures and published maps to promote awareness of local routes and connections to larger regional bikeways.

## **IV. Implementation**

Implementation of the recommendations of this master plan will require a variety of efforts, involving both local and state agencies. Many have been implemented during the process of plan preparation, including the BPC and the Village and the School District working collaboratively on the first Croton Bike Week campaign in September 2008, roadway improvements, and the stationing of crossing guards by the Route 9A southbound Exit ramp at Croton Point Avenue. Following are some of the measures that can be taken to implement the master plan recommendations.

- Secure State funding to implement recommended roadway improvements through grant programs including the Safe Routes to School Program and the Transportation Enhancement Program.
- Use Village capital funds as needed and where feasible to implement recommended roadway improvements.
- Add Bike lanes, roadway markings, and otherwise designate bike routes not requiring significant capital improvements for routes recommended in the Existing and Proposed Bike Routes Map.
- Use the Site Plan Review process when specific properties are before the Planning Board to require sidewalk and bicycle facility improvements where feasible.
- Continue to plan for bicycle and pedestrian safety improvements in the Village of Croton-on-Hudson through updates to this master plan.

### ***Attachments***

Figure 1: Croton Point Avenue/South Riverside Avenue Conceptual Plan

Figure 2: Existing and Proposed Bike Routes

###

Presented April 20, 2009 to Village Board of Trustees



**Figure 2: Existing and Proposed Bike Routes**

