

Red Hook: Bicycle Design Competition

There can be no doubt that the infrastructure we set in place in our cities and communities speaks to the way in which we hope those communities will grow and evolve socially, economically, and aesthetically. They formalize our attitude about cars, bicycles, and pedestrians; but more importantly, they formalize our attitude about one community's relationship and access to another. The Red Hook Bicycle Design Competition gives us an opportunity to address these issues in a New York neighborhood poised for growth and change. We believe that creating a bicycle friendly neighborhood is no small task, and deserves the level of intervention offered to both vehicular and pedestrian traffic. We must see the entire roadway, bicycle lane and sidewalk as a cohesive way-finding system to allow not only easy and safe navigation, but more importantly to create a hierarchy of different kinds of traffic to help guide economic growth. Our proposal answers two important questions: How do we help bicyclists? And how do we help Red Hook?

There are three primary interventions we feel are necessary to reinvent the bicycle experience in Red Hook: The **bike loft** at the new Smith and Ninth Street Station; the **bike-ped bridge** crossing over Hamilton Avenue beneath the BQE; and a **bikescape** which will establish a comprehensive way-finding system to major Red Hook destinations, as well as a street hierarchy expressed in the form of sharrows, striped bike lanes, and dedicated bike lanes.

The **bike loft** and new subway entrance for the Smith and Ninth Street Station takes its formal and functional cues from the structure that supports it. A series of triangular tubes is suspended from and extends beyond the structure of the elevated platform. This creates both the turnstile access to the Brooklyn and Manhattan bound platforms, as well as the bicycle storage areas. Access to the bike loft is achieved from both stairs and elevators.

The **bike-ped bridge** is suspended from the structure of the elevated Brooklyn-Queens Expressway and is the gateway for both pedestrians and bicyclists into Red Hook. The form and path of the bridge is an expression of the entwined relationship between pedestrian and bicycle traffic, and the scale of the infrastructure equalizes the relationship between bikes and pedestrians with vehicles on the overhead BQE.

The **bikescape** is a formal integration of way-finding, street hierarchy, and street furniture such as benches, bike racks, and trellises. Colored stripes on the street guide bicyclists to major destinations, while overhead trellises, sharrows, and bike lanes reinforce the major and minor routes in the neighborhood.

As Red Hook finds itself in a period of transition, it must seize the opportunity to guide its own growth. Regardless of its lack of public transportation, a new emphasis on both bicycle and pedestrian traffic can help to establish a strategic pattern of development. Bicycles and pedestrians, along with the amenities that follow them, can establish a new character and a new identity for an old yet emerging neighborhood in New York.

Feasibility Study and Funding Sources

Construction & Maintenance Estimate

The construction of the **bike loft** as we have proposed it would be estimated to have a construction cost in the realm of up to \$3 Million, not including the cost to construct the park below. This is based on the following assumptions:

- At 12,000 square feet, and containing showers, a bike shop, locker room, café, and other amenities, the cost to build the Millennium Bike Park Station (now the McDonalds Cycle Center) was \$3.2 Million.
- Our proposed bike loft is smaller, at about 7,300 square feet, is elevated, and built within the steel structure of the elevated train. It also contains a new subway station entrance, and elevators. As such, the cost would be expected to be comparable to that at Millennium Park.

Maintenance for such a facility would be expected to cost in the range of \$50,000 per year based on the following assumptions:

- According to BikeStation Coalition, the non-profit organization, the total operating cost of a bike transit center would cost \$25,000 per year for a fully automated, unstaffed facility.
- Although our proposed bike loft would be unstaffed, it would be expected that routine repair and maintenance would be more expensive in the NYC marketplace.
- Elevator maintenance would be an additional item.

Funding Sources

Funding can come from many sources, including private, public or partnerships between the two. For example, the bike station in Chicago's Millennium Park was developed using Congestion Mitigation and Air Quality (CMAQ) funding, which is jointly administered by the US Department of Transportation and the Federal Transit Administration. Two years after it's opening, McDonald's corporation announced a \$5 million grant to underwrite the operations of the center for fifty years. This would be the idea type of operation of a facility of this type – using private sector companies such as IKEA or Fairway to underwrite the maintenance of this project.

The following list provides additional grants or programs that have been identified as potential funding sources. Additionally, a summary table is provided that shows, in matrix format, the types of bicycle improvements that are able to be funded under the variety of programs in the most recent federal transportation funding legislation, SAFETEA-LU.

United States Department of Transportation (USDOT)/Federal Highway Administration (FHWA)

Federal-aid Highway Program

Surface Transportation Program (STP): funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as maps, brochures, and public service announcements) related to safe bicycle use and walking.

Transportation Enhancement Activities (TEAs) or the Transportation Enhancement Program (TEP): funding provided for a specific list of activities that are eligible TEAs, including "provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists..."

Congestion Mitigation and Air Quality Improvement (CMAQ) Program: funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as maps, brochures, and public service announcements) related to safe bicycle use.

High Priority Projects and Designated Transportation Enhancement: Activities identified by Section 1602 of TEA-21 include numerous bicycle, pedestrian, trail, and traffic calming projects in communities throughout the country.

Federal Transit Program

Transit Enhancement Activity: TEA-21 created a program with a one percent set-aside of Urbanized Area Formula Grant funds designated for, among other things, pedestrian access and walkways, and "bicycle access, including bicycle storage facilities and installing equipment for transporting bicycles on mass transportation vehicles". [49 USC Section 5307(k)]

Highway Safety Programs

State and Community Highway Safety Grants: A State becomes eligible for these grants by submitting a Performance plan (establishing goals and performance measures for improving highway safety) and a Highway Safety Plan (describing activities to achieve those goals). 23 USC Section 402. Research, development, demonstrations and training to improve highway safety (including bicycle and pedestrian safety) is carried out under the Highway Safety Research and Development (Section 403) program (23 USC Section 403)

New York State Department of Transportation (NYSDOT)/ New York Metropolitan Transportation Planning Council (NYMTC)

Consolidated Local Street and Highway Improvement Program (CHIPS)/Municipal Streets and Highway Program: funds local highway and bridge capital improvements; assists localities in matching federal funds for projects.

JARC/New Freedom Programs: provides grants funded by Federal Transit Administration (FTA) contained in Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Intended to help

fund innovative projects which identify transportation needs of individuals with limited incomes and persons with disabilities.

Transportation Enhancement Program (TEP) Grants: Federal funding through NYSDOT's TEP for the NYMTC region for transportation projects designed to improve communities. TEP funded projects usually integrate needs of the community into special transportation-related infrastructure projects that add value to the surface transportation system.

New York State Department of Health (NYSDH)

Healthy Neighborhoods Program: provides funds to promote environmentally healthy, safe neighborhoods (New York City, Clinton, Erie, Niagara, Cayuga, Onondaga, Rockland, and Westchester).

New York City Department of Transportation (NYCDOT)

Public Plazas Program: initiative to increase New Yorkers' access to public space.

Pedestrian Ramps Program: Agreement to complete installation of pedestrian ramps throughout New York City.

Coordinated Street Furniture Franchise Program: identifies locations for installation of coordinated NYCDOT street furniture (including bus shelters, sheltered bike parking, newsstands, and automatic public toilets).

Traffic Safety Programs: Safe Routes to School; Safe Routes for Seniors; Safe Routes to Transit

Bikes Belong Coalition

Bikes Belong Grant Program: provides grant money to support bicycle projects and facilities that improve health, strengthen bike businesses, and enhance quality of life.

SAFETEA-LU Bicycle/Pedestrian Funding Opportunities																
(source FHWA Guidance - Bicycle and Pedestrian Provisions of Federal Transportation Legislation – updated 4/4/07)																
<i>(acronym key at end of table)</i>	NHS	STP	HEP	RHC	TEA	CMAQ	RTP	FTA	TE	BRI	402	PLA	TCSP	JOBS	FLH	BYW
Bicycle and pedestrian plan		*				*						*	*			
Bicycle lanes on roadway	*	*	*	*	*	*		*	*	*					*	*
Paved Shoulders	*	*	*	*	*	*				*					*	*
Signed bike route	*	*			*	*									*	*
Shared-use path/trail	*	*			*	*	*			*					*	*
Single track hike/bike trail							*									
Spot improvement program		*	*		*	*										
Maps		*				*					*					
Bike racks on buses		*			*	*		*	*							

SAFETEA-LU Bicycle/Pedestrian Funding Opportunities

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Bicycle parking facilities		*			*	*		*	*							*
Trail/highway intersection	*	*	*		*	*	*								*	*
Bicycle storage/service center		*			*	*		*	*				*	*		
Sidewalks, new or retrofit	*	*	*	*	*	*		*	*	*					*	*
Crosswalks, new or retrofit	*	*	*	*	*	*		*	*						*	*
Signal improvements	*	*	*	*	*	*										
Curb cuts and ramps	*	*	*	*	*	*										
Traffic calming		*	*	*		*							*			
Coordinator position		*				*							*			
Safety/education position		*				*					*					
Police Patrol		*									*					
Helmet Promotion		*			*						*					
Safety brochure/book		*			*	*	*				*					
Training		*			*	*	*				*					

KEY

NHS	National Highway System	FLH	Federal Lands Highways Program	TCSP	Transportation and Community and System Preservation Pilot Program
STP	Surface Transportation Program	BYW	Scenic Byways	JOBS	Access to Jobs/Reverse Commute Program
HEP	Hazard Elimination Program	BRI	Bridge	RTP	Recreational Trails Program
RHC	Railway-Highway Crossing Program	402	State and Community Traffic Safety Program	FTA	Federal Transit Capital, Urban & Rural Funds
TEA	Transportation Enhancement Activities	PLA	State/Metropolitan Planning Funds	TE	Transit Enhancements
CMAQ	Congestion Mitigation/Air Quality Program				