North Hudson County

Bicycle & Pedestrian Study

Final Report

June 30, 2005

submitted to

County of Hudson
Office of Strategic Revitalization

submitted by

The RBA Group, Inc. ENGINEERS · ARCHITECTS · PLANNERS

photo courtesy of Hudson County

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SUMMARY OF FINDINGS

This study was directed towards the identification of non-motorized access and safety problems at priority locations and the development of improvement concepts to address these adverse conditions. The study included a lengthy process to identify and prioritize problematic sites. Five study locations were selected and the sites were evaluated to identify and/or confirm suspected problems that impacted pedestrian access and safety. Through site-specific analysis, solutions were identified to address the problems that were identified, and a set of improvement concepts was developed at each location.

Although each location is unique, and the problems at these locations have unique features, there are a number of issues and concerns common to more than one location. Pedestrian conflicts with turning vehicles, sometimes associated with fast moving turning traffic, and poor sight distances were common. At most locations, these problems were exacerbated by the presence of busses stopped at designated bus stops to discharge or take on passengers. These problems sometimes called for varying solutions, depending on the particular traffic and geometric conditions at each location. At each location, means were sought to improve the visibility of pedestrians as they waited to cross the street or were in the act of crossing or slow vehicular traffic, and to improve the predictability of both pedestrian and vehicular movements. Problems that inhibited access for the transportation disadvantaged, including a lack of curb ramps or curb ramps without detectable warning strips were also prevalent.

A package of improvements was developed for each of the five study sites and is included with this report. In general, relatively modest improvements that can be easily implemented were recommended at each location. Examples of the proposed treatments includes curb ramps with detectable warning strips and improved crosswalk striping, which were recommended at all locations. To improve pedestrian visibility, leading pedestrian interval signal timing was recommended at one location, and curb extensions were recommended at several locations. Curb extensions and reduced curb radii were included to slow down the speed of turning vehicles, and improved lane definition was proposed to create a less chaotic traffic environment at a couple locations. These and a variety of other treatments are detailed and presented in the Concept Plan Packages included with this report.

INTRODUCTION/PURPOSE

In the densely populated municipalities of Hudson County, walking and bicycling for personal transportation are extremely viable travel options. Many people already walk and more would walk and bicycle if access and safety problems that adversely affect non-motorized travel were corrected. Addressing key problem locations can ultimately result in a network of pedestrian and bicycle accommodations that provides access between key trip origins and attractors. Walking and bicycling can then become the modes of choice for even more short distance trips in Hudson County.

The County of Hudson, seeking to capitalize on this potential, sought funding from the North Jersey Transportation Planning Authority (NJTPA) to undertake a study to identify impediments to bicycle and pedestrian travel in five North Hudson County municipalities, investigate the root cause of the safety and access problems that adversely affect bicycle and pedestrian travel at selected locations and develop improvement concepts to remedy those problems.

The team of **The RBA Group**, a nationally recognized full service planning, engineering and architectural firm and El Taller Collaborativo was selected to work with the Hudson County Planning Office to identify key problem locations that adversely affect bicycle and pedestrian access and develop context sensitive solutions to address the problems. This effort is intended to establish a process that can be replicated in the future to continue to address such problems, removing impediments to bicycle and pedestrian travel and, thereby, improve travel options and the quality of life for Hudson County residents.

THE STUDY AREA

The Study Area is comprised of the five North Hudson County municipalities of Guttenberg, North Bergen, Union City, Weehawken and West New York.

THE STUDY PROCESS

The study process included:

- the establishment of a Technical Advisory Committee (TAC) to guide and participate in the study
- a data collection and review effort
- the identification of stakeholders in each community
- stakeholder interviews and the identification of target areas or problem locations where bicycle and pedestrian access and safety have been a problem
- identification and assessment of bicycle and pedestrian trip attractors
- environmental screening to identify environmental sensitivities and cultural features that may influence both the selection process and the treatment concepts that are ultimately to be developed
- a screening of sites and a selection of a set of candidate study locations
- the prioritization of candidate sites and the selection of five locations or "hot spots" for detailed study
- evaluation of bicycle and pedestrian deficiencies and needs at those sites and development of context sensitive improvement concepts at these locations that address pedestrian and bicycle access and safety concerns
- development of preliminary construction cost estimates for the proposed improvements.

In addition, local land use and zoning ordinances and policies that may impact walking and bicycling were evaluated.

TECHNICAL ADVISORY COMMITTEE

A Technical Advisory Committee composed of representatives of participating municipalities, Hudson County, NJTPA, NJDOT and Hudson TMA was convened for the purpose of guiding the study, providing information regarding potential study sites, identifying local stakeholders in each community who would, in turn provide additional information, assist in the final selection and prioritization of study sites and review and comment on proposed improvement concepts. A listing of TAC members is included as ATTACHMENT A.

A summary of the coverage of the three TAC meeting is listed below. Details on specific topics are covered in various sections of the report devoted to those topics.

The first meeting covered:

- the study area
- discussion of the study approach,
- identification of available data sources
- methods and criteria for prioritizing sites
- general or typical pedestrian and bicycle access and safety issues throughout the study area
- various types (a toolbox) of solutions that might be considered, including traffic calming solutions and where they have been implemented in New Jersey
- an exercise to identify candidate study sites; and,
- identification of stakeholders and potential interview subjects

Copies of Fact Sheet #1 in both English and Spanish Language (see below) were provided for distribution.
The second TAC meeting covered:

- data sources consulted including sources consulted to avoid duplicate projects
- trip attractor assessment
- the environmental screening process
- stakeholder outreach activities
- candidate study site prioritization process

After reviewing information developed pertaining to a set of seventeen candidate "hot spot" locations, the TAC members participated in a prioritization process to identify a set of five sited for analysis and the development of improvement concepts.

The third meeting focused on the presentation of and review/comment on the improvement concepts developed at each study site.

Agendas, Sign in sheets and Memoranda to Record of the Three TAC meetings are contained in ATTACHMENT B.

DATA COLLECTION AND ANALYSIS

The purpose of the data collection effort was to provide a general understanding of non-motorized transportation planning, access and safety issues within the study area and to begin focus in on target areas where pedestrian and bicycle access and safety have been a problem. A variety of data related to non-motorized and general transportation planning issues and concerns was collected and reviewed. Key data and information sources consulted are included in ATTACHMENT C.

It should be noted that one of the sources, "Multiple Pedestrian Crash Intersections in New Jersey By Total Severity (Minimum of 7) For 1998 Thru 2000", identified two locations in area that were included on the list of candidate study sites.

Trip Attractor Data and Analysis

A map of bicycle and pedestrian trip attractors within the study area was generated using data from the New Jersey Statewide Bicycle and Pedestrian Master Plan, Phase 2 data disk. (see

ATTACHMENT D.) This map clearly highlighted the fact that there is a very high density of pedestrian and bicycle trip attractors in the study area, confirming the utility of bicycle and pedestrian travel; however, since the numerous attractors are densely distributed throughout the area, the trip attractor data had a marginal impact on the ultimate selection of candidate study sites or the prioritization of those candidate sties.

Later during the study (once a pool of candidate study locations had been selected) sources of information on transportation capital planning, programming and project development, as well as funding awards for non-motorized transportation projects were consulted to insure that problems identified by this effort and projects to address those problems had not previously been initiated (were not already in the pipeline).

PUBLIC OUTREACH/STAKEHOLDER INVOLVEMENT

Public involvement was a critical component of this study and consisted of:

- Technical Advisory Committee (TAC) input on non-motorized needs and problems and on key stakeholders who could also be sources of information on bicycle and pedestrian issues in the study area
- Stakeholder interviews to identify local bicycle and pedestrian needs, opportunities and problem locations
- Fact Sheets (in both English and Spanish Language) intended to inform the public and stakeholders of the nature of the study and to invite input and comment. These were provided to the TAC and to Hudson County for distribution; and
- Stakeholder Open House meeting to review and comment on proposed improvement concepts.

TAC Input

During TAC Meeting #1, and in subsequent follow-up contacts, TAC members provided information on specific non-motorized problem locations in their communities. In addition, they identified additional contacts in those communities who were likely to be able to provide information on non-motorized travel issues and needs.

Stakeholder Interviews

Beginning with contacts provided by the TAC, a series of telephone interviews were held with stakeholders to identify non-motorized problem locations within the study area and to gain an understanding of the specific issues and concerns at those locations. Stakeholders included community representatives and local officials recommended by the TAC and other contacts mentioned or recommended during stakeholder interviews. Each stakeholder was asked to provide information on:

- the location of potential hot spots
- crashes at each location, particularly those involving pedestrians or bicyclists (could be anecdotal)
- observed conflict situations at the location involving pedestrians and bicyclists
- pedestrian waiting time (especially perceived excessive waiting time)
- pedestrian demand, i.e., the number of pedestrians (or bicyclists) at or using the location
- the presence of pedestrian and bicycle trip generators in the vicinity, e.g., school, transit stops, parks, commercial areas, etc.
- environmental problems or constraints that might have a bearing on the feasibility of effecting a solution
- other (any other physical element or aspect of the situation that might have a bearing on the need or desirability of providing a bicycle or pedestrian improvement).

Stakeholders were invited to identify additional contacts who, were in turn, contacted. Over twenty stakeholder telephone interviews were completed. A listing of stakeholders interviewed is included as ATTACHMENT E.

Fact Sheets
Two Fact Sheets (both English and Spanish Language versions) were prepared for this study and provided to the County and to TAC members for distribution throughout the participating municipalities. Fact Sheet # 1, developed and distributed early on during the study, focused on the study purpose, study area and the study process. Fact Sheet #2, developed towards the completion of the study, after the selection of the five study sites, focused on the problems identified at those sites and proposed improvement concepts.

Copies of the two Fact Sheets prepared for this study (both English and Spanish Language versions) are included in ATTACHMENT F.

Stakeholder Open House
The Stakeholder Open House was held on May 17, 2005 at 7:00 p.m. at the Jose' Marti School in Union City (21st & Summit). At that meeting, the proposed improvements were presented and project stakeholders and the general public had the opportunity to review and comment on the proposals. The Agenda, sign-in sheet and Memorandum to Record appear as ATTACHMENT G.

ZONING/LAND USE CONSIDERATIONS

Municipal Zoning and land use codes can have either a positive or negative effect on the creation and implementation of a pedestrian and bicycle friendly transportation infrastructure. As part of this study, available land use and zoning codes (provided by Hudson County) of municipalities in the study area were reviewed to identify sections and wording that could or does have a direct or indirect influence the development of non-motorized facilities and the utilization of bicycle and pedestrian accommodations.

Recommendations for additions or improvements to the language in the land use and zoning regulations were developed. Particular attention was paid to those instances where existing language may have a negative effect on the development of non-motorized facilities and amenities or otherwise may negatively impact travel by walking or bicycling.

Recommended additions or revisions to the land use/zoning ordinances of the five municipalities in the study area are included as ATTACHMENT H.

Existing language in those codes was not found to have a direct bearing on the identification of candidate sites or the "hot spot" prioritization/selection process.

ENVIRONMENTAL SCREENING

Environmental screening was carried out at several levels. A preliminary environmental screening was prepared that identified/assessed a number of environmental factors. The purpose of this screening was to identify any locations where there were environmental conditions or considerations that would affect the development and implementation of the type of pedestrian or bicycle improvements that were likely to evolve from this study. The existence of sensitive environments constraints would be taken into account as part of the process of identifying candidate "hot spot" locations and the subsequent prioritization process.

The preliminary screening included the identification of:

- Green Acres Recreational Lands as listed in NJDEP's applicable Green Acres ROSI lists.
- Hazardous Materials Location identification based on RBA review of available and accessible NJDEP and EPA records.
- Ecological Constraints- (wetlands and waters, floodplains, flora and fauna, threatened & endangered species etc). based on a review of readily available GIS and paper copy documents.
- Land Use Constraints (i.e. zoning, conservation areas, protected farmland areas etc.) based upon readily available local state and federal documents and ordinances.
- Known Cultural Resources

This preliminary screening was used as part of the process of selecting sites for detailed study and concept development. A map of environmental constraints in the study area was prepared. A copy of the Environmental Constraints Map is included as ATTACHMENT I.

The majority of identified environmental constraints in the study area are located along the Hudson River and Hackensack River waterfronts. Since the candidate sites were generally not located in the vicinity of the waterfronts, environmental considerations or sensitivities were not found to have a direct bearing on the selection or elimination of candidate study sites or the "hot spot" prioritization/selection process.

Following the prioritization of candidate "hot spots" and the selection of five study locations, a second level of environmental screening was carried out. Environmental constraints were evaluated relative to each of the five "hotspots." This included an identification of historic/ cultural sites in the vicinity of each site. Based on data obtained from the State Historic Preservation Office, sites listed as on or eligible for listing on the National and State Registers in the vicinity of each study location were identified (see ATTACHMENT J).

No environmental permits are anticipated to implement any of the proposed improvement concepts.

In sum, environmental/cultural sensitivities appear to have no direct impact on either the selection or prioritization of study sites or on the development or implementation of improvement concepts that emerged from this study.

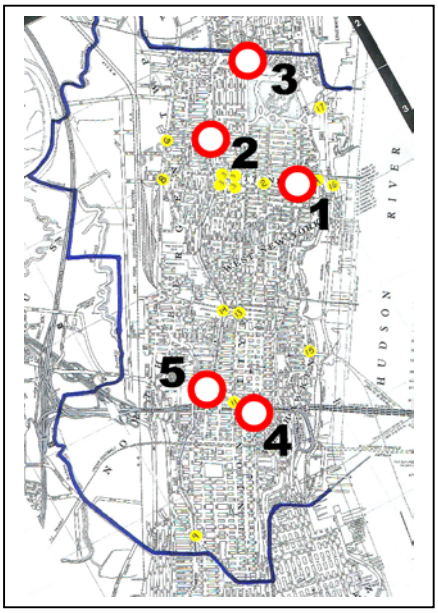
"HOT SPOT" IDENTIFICATION AND PRIORITIZATION

Through the review of data sources, and, especially TAC and stakeholder input, a pool of seventeen candidate study or "hot spot" locations was developed. A listing of the candidate study locations along with pertinent information about each is included as ATTACHMENT K. It should be noted that one of the highly ranked sites (76th and Tonnelle Avenue) was eliminated since, it was determined, that NJDOT had initiated a capital improvement intended to address pedestrian concerns at that location.

Although the study was intended to consider both bicycle and pedestrian problems, the preponderance of concerns brought up by TAC members and stakeholders involved pedestrian considerations. Ultimately, all locations selected for further study involved pedestrian access and safety concerns.

TAC meeting #2 was devoted primarily to a review of the candidate "hot spot" locations and a prioritization process that resulted in the selection of five sites for detailed study and the development of recommended improvement concepts. The five sited selected for detailed study were:

- Park Avenue and 70th Street (Guttenberg).
- 76th Street/Kennedy Boulevard (North Bergen).
- Kennedy Boulevard/Bergenline Avenue (North Bergen).
- Hackensack Plank Road/Palisade Avenue/30th Street (Union City).
- 32nd Street and Kennedy Boulevard (Union City).



PROBLEM ASSESSMENT, IMPROVEMENT CONCEPTS AND COST ESTIMATES

Problem Assessment

The deficiencies and needs at each location were analyzed and assessed in light of the opportunities and constraints at each location. A series of treatments were developed for each location to address the problem conditions.

Field visits were maid to each of the selected hot spot locations. Site conditions were verified and evaluated. Any previously identified pedestrian access and safety issues were verified. A photo-log was developed for each site. Other pedestrian safety issues and concerns were identified. The deficiencies and needs at each location were analyzed and assessed in light of the opportunities and constraints at each location.

Utilizing aerial photography at a scale of 1"= 50', planametric drawings were made of each of the "hot spot" study locations. These planimetric drawings served as base mapping and were used to document the pedestrian access and safety issues at each site.

Improvement Concepts

A series of improvement concepts were developed for each location to address the problem conditions. The 1"= 50', planametric drawings were also used as base mapping for the improvements that were developed at each site.

Draft improvement concepts were reviewed with the TAC at TAC meeting #3. Following this meeting, revisions and modifications were made to the draft concepts in response to TAC comments.

Cost Estimates

Preliminary cost estimates were prepared for all work anticipated to be required to implement the improvement concepts at each site. Cost estimates for each site are included as part of concept plan packages. A discussion of potential funding sources is included as ATTACHMENT L.

CONCEPT PLAN PACKAGES

A concept plan package for each of the five study sites follows. Each package includes:

- aerial photography (1" = 50') of each study location
- list of problems/issues and list of proposed improvement concepts
- map showing problems/issues
- map showing improvement concepts
- preliminary cost estimates for the improvement concepts