



## 2009 Summer E-Newsletter

Summer 2009

### Message from the Chair

Hello Pedestrian and Bicycle Council (PBC) members,

You may have heard the oft-uttered phrase "let no crisis go to waste." It is certainly true for non-auto modes. Now is our time to demonstrate the benefits of walking and cycling and help bring about changes in land use policies to create places where walking and bicycling are preferred (not alternative!) modes. If you don't believe that it can happen, [see this video that I recorded](#) in May in Isla Vista, CA, USA, adjacent to the University of California at Santa Barbara. Not only bikes and pedestrians are present, there are so many of them that they rule the road.

The PBC is making in-roads on affecting change in a number of fashions, most of which were detailed in my last message and are shown in the Technical Projects section of the PBC Wiki. If you have not seen the Wiki yet, please see it by clicking on the Wiki tab in the top right-hand corner of the PBC Web page at [www.ite.org/councils/Ped\\_Bike/index.asp](http://www.ite.org/councils/Ped_Bike/index.asp). If you are looking for an opportunity to help affect change, join us at the ITE 2009 Annual Meeting and Exhibit in San Antonio, TX, USA, August 9-12. On Monday, August 10th at 2:00 p.m., the PBC is hosting a great session on Pedestrian and Bicycle Design and Operations. On Wednesday, August 12th at 3:30 p.m., we are hosting a session on Current Issues in Pedestrian Safety. We are also hosting the third in a series of workshops on Interchange Design to Accommodate Bicycles and Pedestrians on Tuesday, August 11th at 2:00 p.m.

I hope to see you in San Antonio. If you have questions or want to talk about pedestrian and bicycle issues, please feel free to contact me at 415-348-0300 or [m.ridgway@fehrandpeers.com](mailto:m.ridgway@fehrandpeers.com), or post your discussion topic to the Wiki!

Matthew D. Ridgway  
Pedestrian and Bicycle Council Chair

Editors' Note

As the state of the economy continues to dominate the daily news cycle, it is hard to avoid the dismal outlook for local, state and federal governments. In California, for example, the on-going, and increasingly desperate, state budget crisis has legislators contemplating even more borrowing from local transportation funds, which will surely impact the ability of local governments to implement crucial pedestrian and bicycle projects and programs.

At the same time, there is a reason to be optimistic about the future growth and importance of non-motorized transportation as a key component to solving many of our nation's economic, social and environmental challenges. The upcoming reauthorization of the nation's federal transportation bill offers a unique opportunity for reforming America's transportation system, so that it better prioritizes and funds mobility options that are sustainable, efficient and equitable. Meanwhile, local governments, advocacy groups and practitioners continue to redefine pedestrian and bicycle planning and design best practices. In the fall 2009 issue of the ITE PBC E-newsletter, we hope to highlight some of those local efforts and provide you with some information on the latest ped/bike studies, as well as updates on revisions to the AASHTO Pedestrian and Bicycle Guidebooks. We hope that you will enjoy the offerings.

We invite you to send us comments and suggestions at [ite.pbc.news@gmail.com](mailto:ite.pbc.news@gmail.com). We would also like to thank everyone who contributed articles and updates for this E-newsletter.

Lastly, we want to remind you once again to stop by the PBC Wiki. Please visit and share your thoughts!

All the best,  
Phil Olmstead & Mariana Parreiras

## ITE Annual Meeting and Exhibit, August 9-12, 2009

**Henry B. Gonzalez Convention Center  
San Antonio, TX, USA**



Four reasons to sign up today.

1. **Register at the non-member rate and receive a free membership for the remainder of 2009.**

Maybe your company has stopped paying for professional memberships or your training budget is non-existent; if so, this opportunity is a great way to complete your training and take advantage of the valuable membership benefits that ITE offers. For more information, please contact Christina Garneski, Marketing and Membership Services Senior Director, at [cgarneski@ite.org](mailto:cgarneski@ite.org).

2. **Register three or more people from your company and receive a 20 PERCENT DISCOUNT off the total registration price.**

If you take advantage of this discount, please fill out the form located here. Don't forget, early-bird rates end on July 9, 2009.

3. **Fulfill an entire year of professional development requirements.**

ITE will create an electronic professional development tracking form with pre-filled information from the meeting. We also offer a dedicated Web site to keep track of all your professional development, not just ITE training ([www.ite.org/pdrks/default.asp](http://www.ite.org/pdrks/default.asp)).

#### 4. **Hear Drayton McLane Jr., acclaimed businessman, leader and philanthropist speak at the Opening Session.**

Mr. McLane is Chairman of the McLane Group and CEO of the Houston Astros Baseball Club. He will discuss transportation's impact on commerce.

#### **Haven't purchased your plane ticket yet?**



You can now check fares using the Expedia® widget on the ITE Web site. There are many low cost options for getting to San Antonio, TX.

- View the Annual Meeting and Exhibit video on YouTube at [www.youtube.com/watch?v=2rSh1j6GED8](http://www.youtube.com/watch?v=2rSh1j6GED8).
- To register online click here, or to download a faxable form, visit [www.ite.org/annualmeeting/regform.pdf](http://www.ite.org/annualmeeting/regform.pdf).
- For a complete look at the ITE 2009 Annual Meeting and Exhibit program, please visit [www.ite.org/annualmeeting](http://www.ite.org/annualmeeting).

### News Bits, Bites and Links

#### **PBIC to Launch Walk Friendly Communities Program**

*Submitted by Katy A. Jones, University of North Carolina Highway Safety Research Center*

The Pedestrian and Bicycle Information Center (PBIC) is developing a Walk Friendly Communities (WFC) designation program to be launched in 2010. The goal of the program is to encourage towns and cities across the United States to prioritize safer walking environments and to officially recognize those municipalities that have excelled in their efforts.

The WFC program will recognize communities that are working to improve a wide range of conditions related to walking, including safety, mobility, access and comfort. The WFC program will be comparable to the Bicycle Friendly Communities program currently operated by the League of American Bicyclists ([www.bikeleague.org/programs/bicyclefriendlyamerica/communities](http://www.bikeleague.org/programs/bicyclefriendlyamerica/communities)). WFC will promote the use of the 5 Es (engineering, education, enforcement, encouragement and evaluation) as a framework for helping communities to become more walkable and to set clear goals and plans for achieving those goals. Pilot testing of the WFC application began in the summer of 2009 and the program will officially kick off in early 2010.

For more information, including updates and a list of partners, please visit [www.walkinginfo.org/WFC](http://www.walkinginfo.org/WFC).

#### **PBIC Updates Case Study Compendium**

*Submitted by Katy A. Jones, University of North Carolina Highway Safety Research Center*

The PBIC has updated its Case Study Compendium, a collection of all of the case studies developed by the PBIC and the Association of Pedestrian and Bicycle Professionals (APBP). The case studies cover pedestrian and bicycle projects and programs from across the United States and abroad while highlighting best practices on engineering, education, enforcement, encouragement, planning, health promotion and comprehensive safety initiatives.

The PBIC also invites you to share your pedestrian or bicycle program's activities and successes with us. To submit a case study or share an idea, please e-mail Laura Sandt at [sandt@hsrc.unc.edu](mailto:sandt@hsrc.unc.edu).

You can access the compendium (PDF) or search through the case studies at [www.walkinginfo.org/case\\_studies](http://www.walkinginfo.org/case_studies).

## **Training Available on Creating Livable Communities**

*Submitted by Katy A. Jones, University of North Carolina Highway Safety Research Center*

The PBIC offers the Creating Livable Communities through Public Involvement course. This one-day course is designed to help government-sponsored boards and commissions; advocacy, business and neighborhood-based groups; and individuals work collaboratively to create livable communities through public involvement. Participants will learn organizational models and strategies for working together on pedestrian and bicycle transportation projects and safety programs. The intent is to achieve better outcomes that have community buy-in and support.

Training objectives for this course include:

- Identify the "ingredients" of what makes a "livable" community.
- Identify the various types of public involvement groups, their roles and responsibilities, and their relationships to government and other stakeholders.
- Understand current structures and opportunities for public involvement in order to identify what is missing and what could be improved.
- Create publicly supported and trusted policies, programs and projects.
- Articulate how 25 people can create positive change.
- List specific examples of what has worked in other communities.
- Clearly identify priorities, next steps and a clear vision of where to go in the future.

This training is designed for citizens, business leaders, engineers, planners, traffic safety and enforcement professionals, public health and injury prevention professionals, and decision makers who have the responsibility of implementing pedestrian/bicycle projects and programs at the local or state level. For more information on this course, please visit [www.walkinginfo.org/training/pdps/descriptions.cfm](http://www.walkinginfo.org/training/pdps/descriptions.cfm).

## **Opinion Survey for the Next Edition of the AASHTO Pedestrian Guide**

*Submitted by Jennifer L. Toole, Toole Design Group*

What would you like to see in the next edition of the AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities?

A new opinion survey offers you the opportunity to weigh in on new topics or changes in content that should be included in the next Guide. The National Cooperative Highway

Research Program of TRB has contracted with Toole Design Group to develop an outline of the scope and content of the next edition of the Guide. As a part of their research, Toole Design Group is asking for opinions about changes and updates to the Pedestrian Guide. Even if you are only an occasional user of the Guide, your input is valuable and will help ensure that the next Guide contains the most valuable and relevant information.

Please click on the following link to participate in the survey:  
<http://tinyurl.com/AASHTO-Ped-Guide>

For more information on the project, please contact James Elliott at  
[jelliott@tooledesign.com](mailto:jelliott@tooledesign.com).

## Featured Articles

### **University of Illinois at Urbana-Champaign: Light up the Night!**

*Submitted by Morgan B. Johnston, University of Illinois at Urbana-Champaign*

In fall 2008, a number of organizations collaborated to promote bicycle safety at the University of Illinois at Urbana-Champaign. The idea to combine a bicycle light giveaway with an educational program was first proposed by the Champaign-Urbana Mass Transit District (CUMTD) to the Campus Area Transportation Study (CATS). CATS is a subcommittee of the Champaign-Urbana Urbanized Area Transportation Study, the "transportation arm" of the Champaign County Regional Planning Commission (the MPO for the region). With additional funding from CATS and the C-U Safe Routes to School Project and support from the University of Illinois, the Cities of Champaign and Urbana and the local Champaign County Bikes bike club, CUMTD was able to coordinate the "Light up the Night" Bike Light Distribution Campaign.

Although the Illinois vehicle code does require a front light at night, the motivation behind the campaign was broader than to promote compliance with the law. In a survey conducted in 2007, the University found that 9% of the student population uses a bicycle as its primary mode of transportation, and that 42% of students use a bike at least once a week. In addition, according to university officials, bicycling has been on the rise on campus in the last year; and based on the "Fatality Facts 2007" report published by the Insurance Institute for Highway Safety, the time period with the greatest incidence of bicycle fatalities in the state is 6:00 p.m. to 9:00 p.m. Although no time-specific collision data is available for the university, there is plenty of anecdotal evidence that a large proportion of bicyclists on campus often continue to ride after dark without lights. Thus, in supporting the project, the university sought to actively address this potential safety problem.

The pooled funding allowed The Bike Project ([www.thebikeproject.org](http://www.thebikeproject.org)), a local bicycle advocacy group, to coordinate the discounted purchase of 1,080 safety light sets (2,160 lights) from a bike parts wholesaler with a strong connection to advocacy. The lights were given away for free to university students, community members and children with the only requirements being that the recipients had to bring their bicycle to the event and participate in a short discussion about bike safety during installation of the lights.



*Volunteers install bicycle lights during the "Light up the Night!" campaign.*

The purpose of the campaign was to improve the visibility of bicyclists at night while educating riders about the importance of being visible to motorists and the safety benefits of riding with bike lights at night. Volunteers equipped bicycles with free "Blinky" safety sets of front white-LED and rear red-LED lights, educated riders about bike safety, and distributed literature on safe bicycle practices, including copies of the recently-released local bicycling map ([www.champaigncountybikes.org/images/CUbikemap.pdf](http://www.champaigncountybikes.org/images/CUbikemap.pdf)). The university hopes that the large influx of lights will shift awareness on campus and in the neighboring communities to make lights an obvious night-riding accessory. A noticeable increase in lighted bicycles after the campaign attests to its success, and CATS now plans to make it a yearly event.

## **Evaluation of Strengthened Bicycle Lanes in Melbourne, Australia**

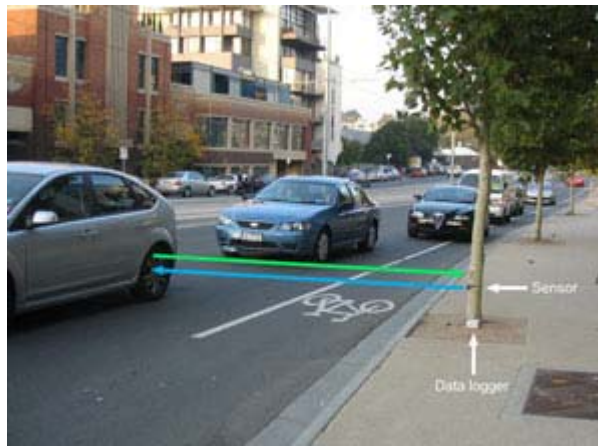
*Submitted by Malcolm Daff, Sinclair Knight Merz*

### *Introduction*

This study, commissioned by VicRoads, tested the use of a tram-type separator material along three roads in Melbourne. The purpose of the study was to evaluate the potential of the separator to strengthen bicycle lanes, improving both actual and perceived safety for cyclists.

### *Methodology*

Our approach included the use of video recording alongside an ultrasonic sensor system. The ultrasonic sensor measures the distance of objects up to 6.5 m (21 ft.) away with an accuracy of 2.5 cm (1 in.). The sensor and associated electronics are very small, and so can be easily concealed, as shown in Figure 1.



*Figure 1: Sensor system installed on site.*

The sensor can be installed on the curbside to determine the lateral position of cyclists and cars relative to the curb. Alternatively, the sensor can be installed on a bicycle to measure the distance between cars and the bicycle during overtaking. The system offers a number of advantages over relying solely on video or manual observations:

- It offers a high level of accuracy;
- It avoids laborious manual video processing; and
- It can obtain many samples quickly and cost-effectively.

While useful in itself, the sensor data cannot provide information of the context of the traffic flow; thus, video recordings were used to complement the data provided by the sensor, both to confirm the sensor findings qualitatively and to provide useful contextual information.

### *Separators and Trial Sites*

The separator tested as part of this study was identical to the treatment used in a number of locations in Melbourne to strengthen on-road tram routes. As shown in Figure 2, the separator is 350 mm (14 in.) wide and approximately 50 mm (2 in.) high.



*Figure 2: Close up of separator material.*

Three trial sites were selected for the study:

- Chandler Highway northbound between the Eastern Freeway and Yarra Boulevard (Figure 3);
- Burnley Street southbound from Victoria Street adjacent to Victoria Gardens Shopping Centre;
- Yarra Boulevard southbound near the corner of Molesworth Street in Kew.



*Figure 3: Separator installed along Chandler Highway.*

These sites were selected not only because they offered potential for permanent installation, but also because they represented conditions where there is no on-street car parking or driveways. The sites offered a variety of test conditions: a major arterial (Chandler Highway) to a busy urban street (Burnley Street) and quiet street on a bend (Yarra Boulevard). The volume and types of cyclists differed between the sites. Yarra Boulevard had many more cyclists, but most of these are training cyclists. By comparison, the Chandler Highway and Burnley Street sites have predominantly commuting cyclists.

### *Results*

From the measurement of the lateral position of vehicles, a quantitative assessment can be made based on two criteria:

1. The average distance from the curb of cars;
2. The percentage of cars entering the bicycle lane.

Figures 4 and 5 illustrate these measures for the separator at the Chandler Highway site. Four locations along the road were tested, with location 1 being close to the Eastern Freeway off-ramp and location 4 near the Yarra Boulevard intersection. As shown in Figure 4, around 25% of all vehicles encroached into the bicycle lane before the installation of the separator at location 1. After the separator was installed, the proportion of vehicles entering the lane dropped dramatically to 7% of all vehicles. Similar reductions of 50% or more were found at the other Chandler Highway locations and at Burnley Street.



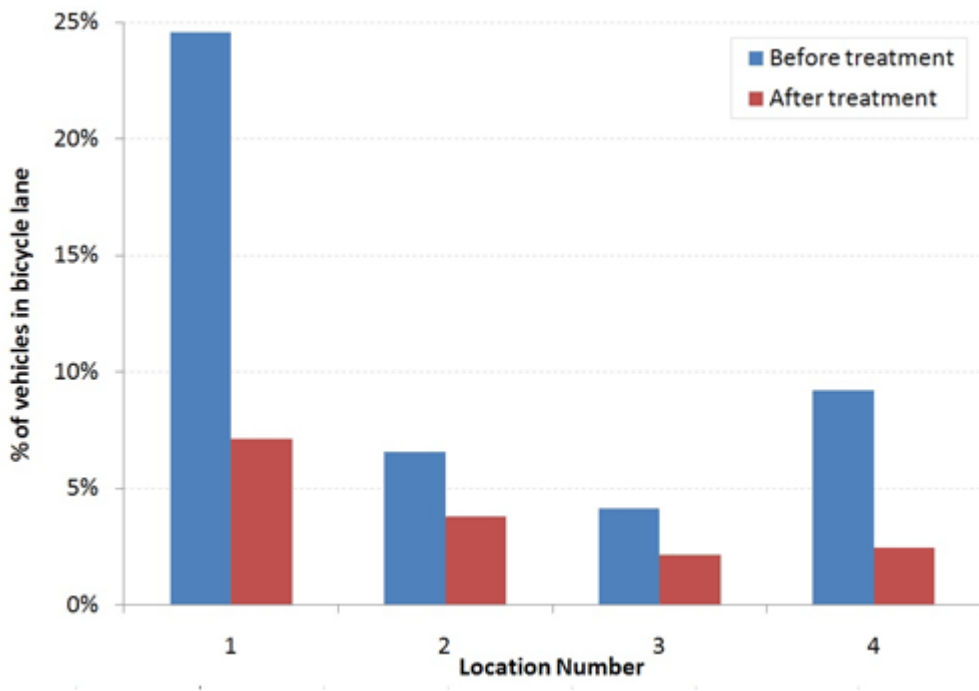


Figure 4: Rate of encroachment into bicycle lane along Chandler Highway.

Figure 5 shows the distribution of vehicle lateral positions before and after the installation of the separator at location 4 on Chandler Highway. This graph illustrates the shift of vehicles away from the curb and therefore away from the bicycle lane. Site observations supported this evidence - that the rate of infringement was very significantly reduced with the separator installed at all three sites.

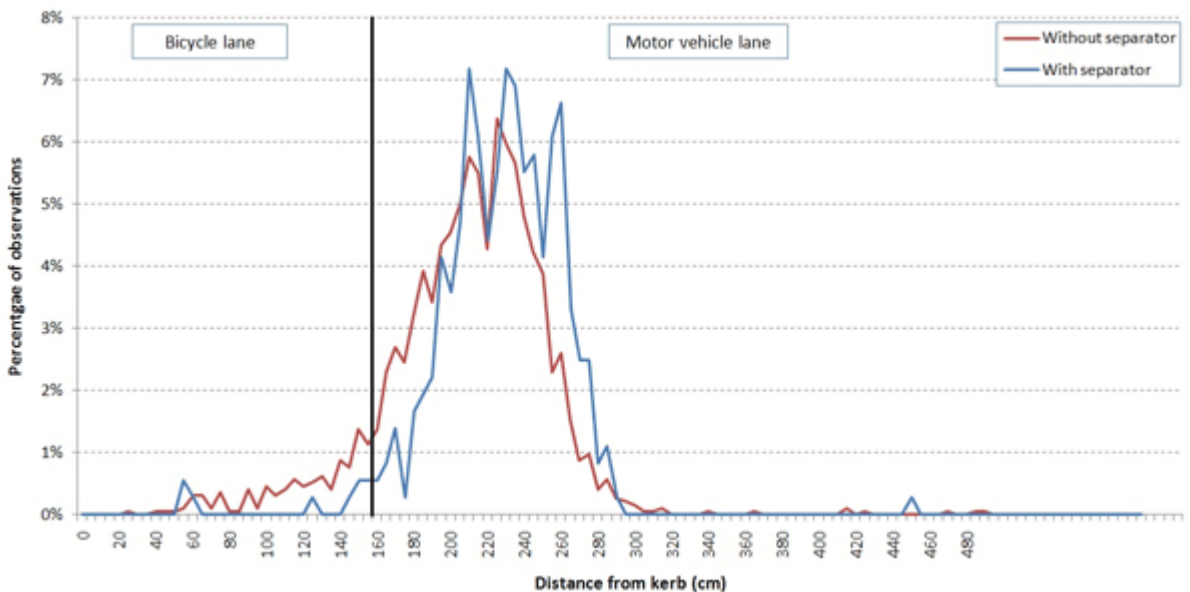


Figure 5: Histogram of lateral position from curb of vehicles before and after installation of separator.

Interviews with cyclists using the facilities indicated overall support for the separators as a means of improving cyclist safety. While the sample of cyclists was small, it is likely

that less confident cyclists would be most keen on the separator.

### *Conclusion*

The innovative testing methodology used for this study provided a rigorous method of evaluating the separator performance. The separator has the effect of reducing motor vehicle infringements into bicycle lanes by more than 50%, with the greatest benefits where infringements are most frequent before the installation of the separator. Furthermore, cyclists indicated they felt the separators improved on-road safety.

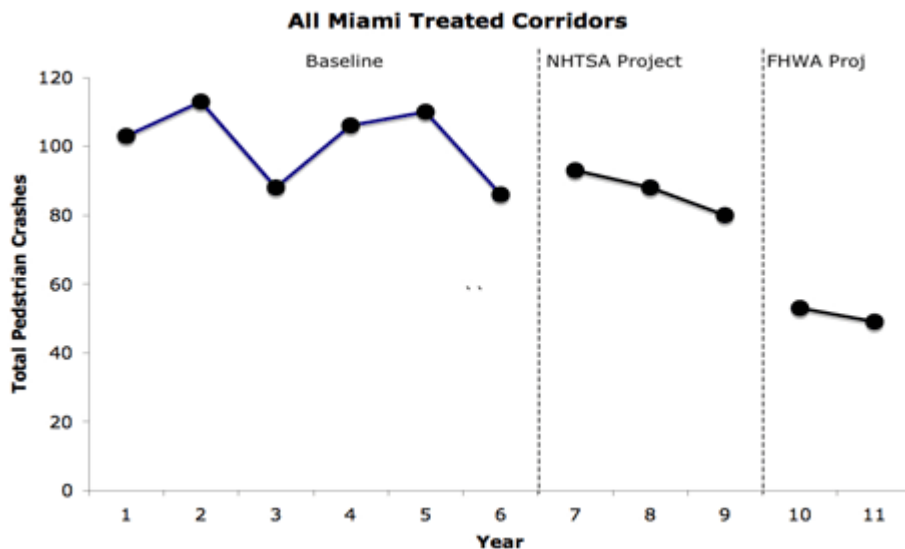
We have developed a methodology for VicRoads to help evaluate potential sites for this treatment based on the experience from the trials. It is likely that this particular separator material will be useful at sites where there is no on-street parking, but that other treatments (such as rumble strips) may be more applicable at other locations. We have not evaluated alternative separator geometries as part of this study.

## **FHWA Concludes Successful 6-Year Study on Deployment of Pedestrian Countermeasures in Three Cities**

*Submitted by Tamara Redmon, Federal Highway Administration (FHWA)*

Pedestrian fatalities are often sporadic events that do not necessarily occur all at the same location or under the same conditions, so that it is difficult to identify patterns. This, in turn, makes it difficult to design solutions to minimize fatalities. In an attempt to address this issue, in 2003 the FHWA awarded grants to the cities of San Francisco, CA, USA; Las Vegas, NV, USA; and Miami, FL, USA, to develop plans for deploying and evaluating various pedestrian safety countermeasures in high crash "zones" and locations. The grant amount for the implementation of safety countermeasures in each city was approximately \$1 million. The purpose of the project was to demonstrate how a city can improve pedestrian safety by performing a detailed analysis of its pedestrian crash problem, identifying and evaluating high crash locations, observing factors such as driver and pedestrian behavior, and deploying various low-cost countermeasures tailored to each site within the city. An independent evaluation was also conducted to compare the results of countermeasure deployment across the three cities.

Since it takes a few years for the effects of a treatment to make an impact on crash incidence, crash data was not yet available for San Francisco and Las Vegas at the conclusion of the project. Instead, researchers examined measures of effectiveness (MOE) related to pedestrian and driver behavior to determine if there has been a safety improvement. Using these MOEs and comparing them across cities, researchers found seven countermeasures that were highly effective in improving pedestrian safety: leading pedestrian intervals; pedestrian countdown signals; in-street pedestrian signs; activated flashing beacons; rectangular rapid flash beacons; call buttons that confirm the press; and Danish offsets combined with high visibility crosswalk, advance yield markings, and YIELD HERE TO PEDESTRIANS signs.



In Miami, researchers evaluated crash data as well as MOEs. In addition, prior to the implementation of FHWA's project, the National Highway Traffic Safety Administration (NHTSA) started a study to examine the effects of law enforcement and education programs on crash incidence. Data was collected for six years prior to the introduction of the NHTSA study, for three years during which NHTSA's law enforcement and education programs were implemented, and for additional two years during which FHWA's safety countermeasures were implemented, providing a total of 11 years of crash data at the Miami sites. The installation of the engineering countermeasures in addition to the NHTSA education and enforcement efforts lead to a remarkable 50% reduction in pedestrian crashes, as illustrated in the figure below.

Overall, it appears that the project was successful in demonstrating that a locality can implement targeted low-cost improvements and can have an impact on its pedestrian safety problem. The in-depth final reports from each location as well as the independent evaluation are available at [http://safety.fhwa.dot.gov/ped\\_bike/ped/ped\\_scdproj/](http://safety.fhwa.dot.gov/ped_bike/ped/ped_scdproj/).

## **Bellingham, Washington's Multimodal Method of Measuring Development Impacts**

*Submitted by Chris Comeau, City of Bellingham*

### *Introduction*

The City of Bellingham, WA, USA has adopted an innovative method of measuring not only multimodal transportation infrastructure, but also the impact that new development has upon it by adopting new Multimodal Transportation Concurrency regulations. The new methodology replaces the traditional volume-to-capacity (v/c) level of service (LOS) system, which only measured automobile trips on arterial streets. The new methodology seeks to better account for pedestrian, bicycle, and transit modes in addition to the automobile. By providing a framework in which all four major transportation modes are considered, the new system is expected to help further implement infill land use strategies and multimodal transportation policies that promote "urban villages," as adopted in Bellingham's Comprehensive Plan.

### *Background*

Since 1990, Washington's Growth Management Act (GMA) has required cities and counties to develop comprehensive plans with 20-year growth forecasts. Mandated plans must include land use and transportation elements, with an emphasis on high-density,

mixed-use areas and multimodal transportation facilities. GMA also requires cities to adopt level of service (LOS) standards and transportation concurrency ordinances to monitor, maintain and enforce LOS standards to ensure "adequate public facilities" at the time of development. State law prohibits issuance of permits for new development with impacts that exceed adopted LOS standards. As part of the 20-year growth plan, Bellingham has actively promoted pedestrian, bicycle and transit service and facilities as part of its infrastructure development and in response to projected growth. City officials hope that people will take advantage of multimodal facilities, thereby lowering the rate of increase in annual vehicle miles traveled as Bellingham's population continues to grow.

Bellingham's focus on integrating land use and transportation planning led city transportation planners and Kirkland-based consultants Transpo Group to develop the new multimodal methodology to address the shortcomings of the traditional and auto-centric v/c LOS system. Transportation planners began work in the summer of 2007, hired Transpo Group in 2008, and evaluated 15 different alternative methodologies before deciding on the preferred alternative: Person Trips Available by Concurrency Service Area. The City's Bicycle and Pedestrian Advisory Committee (BPAC) was tasked with prioritizing bicycle and pedestrian facility needs within each Concurrency Service Area. Four work sessions and four public hearings were held before the Bellingham Planning Commission and City Council. The new multimodal approach was adopted in December 2008 and the Multimodal Transportation Concurrency requirements went into effect on January 1, 2009.

#### *Multimodal Methodology*

Transportation planners divided the city into 15 Concurrency Service Areas (CSA), each having unique land use patterns, transportation facilities and services available, which influence travel behavior and the transportation choices that people make. The presence and availability of pedestrian, bicycle, transit and automobile facilities within each of these 15 CSA determines the number of Person Trips Available (PTA) in each CSA. For example, under the new system, the downtown CSA with many small block grid-oriented streets and ample pedestrian, bicycle and transit facilities would have more PTA than an outlying suburban area with long blocks, few pedestrian or bicycle facilities, and little to no transit facilities and services.

Bellingham continues to measure arterial capacity by conducting traffic counts and works directly with Whatcom Transportation Authority (WTA), the regional transit agency, to measure seated transit capacity and actual transit ridership. While measuring road and transit capacity is relatively straight forward, it is much more difficult to measure the capacity of bike paths and sidewalks. Rather than measuring capacity, Bellingham now measures the degree of completeness of the bicycle and pedestrian facilities in each CSA and awards PTA credit accordingly. Bicycle or pedestrian facilities must be a minimum of 50% complete in a CSA to be credited with PTA. For every 1% complete over 50%, the City will deposit 20 person trip credits into a CSA account. The City keeps a citywide inventory of bicycle and pedestrian facilities in a GIS database and annually measures the existing inventory against the total adopted planned bicycle and pedestrian network of facilities needed to serve new growth. Bellingham's Transportation Element includes over 100 bicycle and pedestrian projects recommended by the City BPAC for the 20-year planning period.

Bellingham publishes a Transportation Report on Annual Concurrency (TRAC), which is a status report on the citywide surface transportation network. The TRAC now also reports the number of "Person Trips Available by Concurrency Service Area" for developers to draw upon in the coming year. Bellingham's new Multimodal Transportation Concurrency system works something like a checking account for each CSA. The account balance for

each of the 15 CSAs is established in the TRAC each year and developers withdraw person trips from the account with each new development application. The City, transit agency, or private sector can deposit person trips into accounts through capital projects and transportation mitigation. The City will not allow new development to overdraw the account. For example, if there are not enough person trips available to serve the new development, then mitigation will be required to earn person trip credits through construction of new multimodal facilities on the BPAC priority list of sidewalk and bicycle lane projects identified for each CSA from the Transportation Element of the Comprehensive Plan.

Public Works presents the TRAC to the Planning Commission and the City Council at the beginning of each year. This allows staff to make recommendations for changes when necessary, alert decision makers about concurrency issues, and to seek direction from the City Council. If, and when, amendments or adjustments to the multimodal methodology are necessary, they must be approved by both the Planning Commission and City Council through an open public process.

### *Conclusion*

This new multimodal transportation concurrency method should further enhance the City's ability to apply multimodal transportation policy to direct growth into urban villages, which are identified as the most appropriate for higher density, mixed-use infill development within the Bellingham community.

For more information, please contact Chris Comeau, Transportation Planner, City of Bellingham Public Works Department, at (360) 778-7900 or [ccomeau@cob.org](mailto:ccomeau@cob.org).

## **Progress on the Update to the AASHTO Bike Guide**

*Submitted by Jennifer Toole, Toole Design Group*

As many are already aware, a comprehensive revision is currently underway for the AASHTO Guide for the Development of Bicycle Facilities (1999 Edition). The revision is being completed as an NCHRP research project, under the direction of a panel of experts from throughout the United States.

The goal of this project is to ensure that the Guide not only reflects current thinking in bicycle facility planning and design, but also incorporates research that has occurred over the past decade. The new edition of the AASHTO Bike Guide will also be coordinated with new content proposed for the upcoming revision to the MUTCD.

Of particular note are several key research projects that have yielded more data than we have ever had before on the characteristics of bicyclists and the performance of various types of facility designs. This new research has been instrumental in developing research-based guidance on appropriate design user speeds, horizontal and vertical alignment and intersection design. The new Guide will cover a wide variety of new topics, as well as expand upon previous guidance in a number of areas, including:

- More context and detail for bike lane guidance, including additional information on bike lanes with a variety of parking configurations.
- Expanded section covering bike lanes at intersections.
- Expanded emphasis on elements of roadway design that should be compatible with bicycling, including roundabouts, traffic calming, traffic signals, rumble strips and freeway ramps.
- New section on retrofitting existing roadways to accommodate bicycles.
- New section that covers the use of shared lane markings, expanding on proposed

guidance in the MUTCD.

- New section on bicycle boulevards.
- Revised and expanded guidance on bicycle way-finding and guide signing, coordinated with proposed language in the MUTCD.
- Revised and expanded guidance on accommodating bicyclists at freeway interchanges.
- Significant changes to shared use pathway design guidance that reflects new research, including an expanded section on pathway/roadway intersection design.
- New chapter on bicycle parking design.

One challenge in preparing this latest edition has been a debate about whether design treatments that are fairly new in the United States (cycle tracks, bike boxes, bicycle signalheads, and use of a contrasting colored pavement in bike lanes) should be included in the new Guide. Inclusion in the MUTCD is necessary before new signs, signals and pavement markings can be included in the AASHTO Bike Guide. Bike boxes, bicycle signalheads and colored pavements are not proposed for the next edition of the MUTCD. This challenge has been addressed by including a final chapter in the Guide entitled "Design Issues on the Horizon."

### *Project Timeline*

- NCHRP Project Complete - Fall 2009
- Balloting Process by States - Early 2010
- Publication Estimate - Mid to Late 2010

NCHRP Panel Chair: Dwight Kingsbury, Florida Department of Transportation TRB Staff Representative: Christopher Hedges, Senior Program Officer Principal Investigator: Jennifer Toole, Toole Design Group, 301-927-1900 ext. 103, [jtoole@tooledesign.com](mailto:jtoole@tooledesign.com).

## **City of Toronto's Guidelines for the Design and Management of Bicycle Parking Facilities**

*Submitted by Pauline Craig, City of Toronto*

In 2008 the City of Toronto released its Guidelines for the Design and Management of Bicycle Parking Facilities. The Guidelines apply to the design, review and approval of all new developments requiring bicycle parking facilities and are applicable citywide.

The purpose of the Guidelines is to encourage the private sector to develop high-quality bicycle parking facilities by providing planners, developers, architects and property managers with specific design and management strategies. Application of these strategies in new developments is consistent with and supportive of Official Plan policies and environmental performance targets of the Toronto Green Development Standard. In addition to new developments, the Guidelines also provide direction for existing buildings undergoing redesign or renovation. The Guidelines fulfill recommendation 9-5 of the City of Toronto's Bike Plan, which calls for the development of a set of "bicycle parking guidelines for developers and property managers to assist in the provision of high quality bicycle parking facilities."

In order to improve the quality of bicycle parking that is created through development approvals, the guidelines address specific areas of concern including: poorly designed bicycle racks that do not allow cyclists to lock bicycles securely; a lack of secure, long-term bicycle parking; inaccessible or underutilized bicycle parking; and bicycle parking areas that are not properly managed so as to prevent misuse of the facility and to reduce the likelihood of bicycle damage or theft.

Examples and best practices are included in the Guidelines to better inform decisions on the design, installation and management of both short-term and long-term bicycle parking infrastructure. Site design strategies are provided to facilitate bicycle access to parking facilities.

The table below summarizes the key sections of the Guidelines:

Short-Term Bicycle Parking	good vs. poor bicycle rack designs; options for covered bicycle parking; installation guidelines, including rack placement and spacing.
Long-Term Bicycle Parking	bicycle parking options, including indoor bicycle rooms, parking garages, bicycle cages, bicycle lockers.
Site Design Strategies	strategies to provide bicycle access including: stairway treatments; bicycle paths on-site; signage; designing for safety, security and convenience; and options for creating attractive, custom designed facilities.
Building Management, Operations and Employer-Based Strategies	strategies to maintain and manage short and long-term parking infrastructure in order to facilitate use of bicycle parking; operational strategies to maximize security for cyclists and their property; and employer-based strategies to encourage bicycle use.
Bicycle Parking Facilities in the Public Right-of-Way	processes required to obtain post-and-rings parking for new developments (where approved); existing city by-laws, policies and guidelines that determine the placement and design of bicycle racks in the public right-of-way.

Designing and developing high-quality bicycle parking infrastructure in new and existing developments will go a long way towards supporting and increasing the use of bicycles for everyday travel needs. Bicycle use plays an increasingly important role in the development of a more efficient transportation system in Toronto and in achieving Toronto's greenhouse gas reduction targets. The Guidelines support the development of high-quality bicycle parking and thereby provide a vital contribution to a sustainable transportation system and a growing culture of active transport in Toronto.

To read the complete Guidelines, please visit [www.toronto.ca/planning/bicycle\\_parking\\_guide.htm](http://www.toronto.ca/planning/bicycle_parking_guide.htm).

## Ped & Bike Funnies

### **Ode To A New York City Walk Signal**

*By Madeleine Begun Kane*

Oh WALK light, you change way too fast.  
 Your pedestrian green doesn't last.  
 You force me to run  
 Cross the street, which ain't fun.  
 So thanks for this cumbersome cast.

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Institute of Transportation Engineers | 1099 14th Street NW | Suite 300 West | Washington | DC | 20005