



ARTICLE FROM THE BOOK:

Cyclists & Cycling Around the World – Creating Liveable and Bikeable Cities

Edited by Juan Carlos Dextre, Mike Hughes & Lotte Bech

Published by Fondo Editorial, Pontificia Universidad Católica del Perú, 2013

ISBN: 978-612-4146-55-8

The NACTO Urban Bikeway Design Guide - Turning innovation into action in U.S. cities

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In 2011, the National Association of City Transportation Officials (NACTO) published its landmark Urban Bikeway Design Guide. This innovative document is the result of partnership between U.S. cities and a creative project team that developed a new toolbox for designing urban streets. The project was sponsored by the bicycle industry, with funding from the Bikes Belong Coalition and the SRAM Cycling Fund. The NACTO Guide was developed using on-line collaboration tools, with full colour, three-dimensional graphics and the input of bikeway design professionals from throughout the U.S. For many years, urban designers in the U.S. had been limited by the current national standards produced by the federal government (the Manual of Uniform Traffic Control Devices, or MUTCD) and by State Departments of Transportation (the AASHTO Guidelines for the Development of Bicycle Facilities). These national level guides are the result of national committees, take years to develop and are primarily intended for state and federal agencies. Because the demand for innovative urban bicycle facilities in the U.S. was steadily increasing, NACTO decided to produce a new kind of design guide that was developed by cities, for cities. The new NACTO Urban Bikeway Design Guide is a living document produced in both an online version (see Appendix) and a printed version that can be continually updated and changed over time.

The effort to create the NACTO Guide represents a significant change in the bicycling movement in the U.S. For many years, leaders in progressive transportation had tried to improve the MUTCD and AASHTO guides, but the pace of change in cities continued to be faster than these national documents could be updated. As cities including Portland, Chicago, New York and others began to use innovative designs from around the world, a gap was developing between contemporary best practices and the existing national guidelines.



Portland, Oregon Mayor Sam Adams, Mia Birk of Alta Planning + Design and others discuss the concept of the NACTO Guide in October, 2009. Photo: J.Olson

Design elements that were commonplace in Amsterdam, Copenhagen, Montreal and other international cities simply were not in the manuals being used in the U.S. Cycle-specific traffic signals, cycle tracks, bike boxes and other innovations were known to be successful in other places, but American designers were being kept from using them because U.S. guidelines for these treatments did not exist. Because most U.S. design professionals rely on published design guidelines as protection from legal liability, the phrase “it’s not in the manual” became a common response to why communities could not use the innovative treatments that were being implemented in cities around the world.

In October 2009, a group of national leaders met at the headquarters of Alta Planning + Design in Portland, Oregon to discuss creating a new urban bikeway design manual. While many people had talked about doing this before, it was a core group initiated by Mia Birk of Alta, Rob Burchfield and Roger Geller of Portland, along with support from the Bikes Belong Coalition and the SRAM Cycling Fund that moved the concept forward. A key to making this initiative possible was that the mayors of large U.S. cities were being challenged to implement significant initiatives for bicycling. Led by Transportation Commissioner Janette Sadik-Khan from New York, the cities had formed a new alliance called NACTO, the National Association of City Transportation Officials. The NACTO cities were trying to innovate, but they were experiencing institutionalized resistance when they tried to install designs that were “not in the manual.” Mayor Sam Adams of Portland personally attended that first meeting in 2009, and made it clear that he and his peers in other U.S. cities supported the creation of a new way to solve this problem.

After that initial meeting in Portland, NACTO engaged a consulting team led by Alta, Kittelson & Associates, Open Plans and a group of advisors from the U.S., Denmark and the Netherlands to develop the new design guide. The project was promoted under the NACTO Cities for Cycling program, and had the support of member cities including Baltimore, Boston, Chicago, Washington DC, Houston, Los Angeles, Minneapolis, New York City, Philadelphia, Phoenix, Portland, Seattle, San Francisco and Austin. Momentum for the project accelerated quickly. When NACTO hosted a “Cities for Cycling” event at the Brookings Institution in December 2009, the keynote speaker was artist, musician and author David Byrne – and it was clear that the bicycling movement was being taken to a new level. NACTO issued a request for proposals for the guide, and the winning project team was tasked to produce the new guide within a year. The online version of the guide was launched in May, 2010 and the printed guide was released in October 2011. The NACTO team created a game-changing document that has significantly advanced the field of urban cycling in America. At the event celebrating the release of the printed guide, USDOT Secretary LaHood said, *“This is an extraordinary piece of work that’s long overdue.”*

There are three key issues that the new NACTO Guide represents: the use of web-based technology in planning, changing perspectives on the types of urban bicycle facilities, and lessons learned for global advancement of best practices for active mobility. Each of these issues is discussed in the following sections.

“USDOT Secretary Ray LaHood with NYCDOT Commissioner Janette Sadik-Khan and Congressman Earl Blumenauer of Oregon at the public announcement of the new NACTO Guide in Washington, DC in October, 2011. Photo: Darren Flusche, League of American Bicyclists



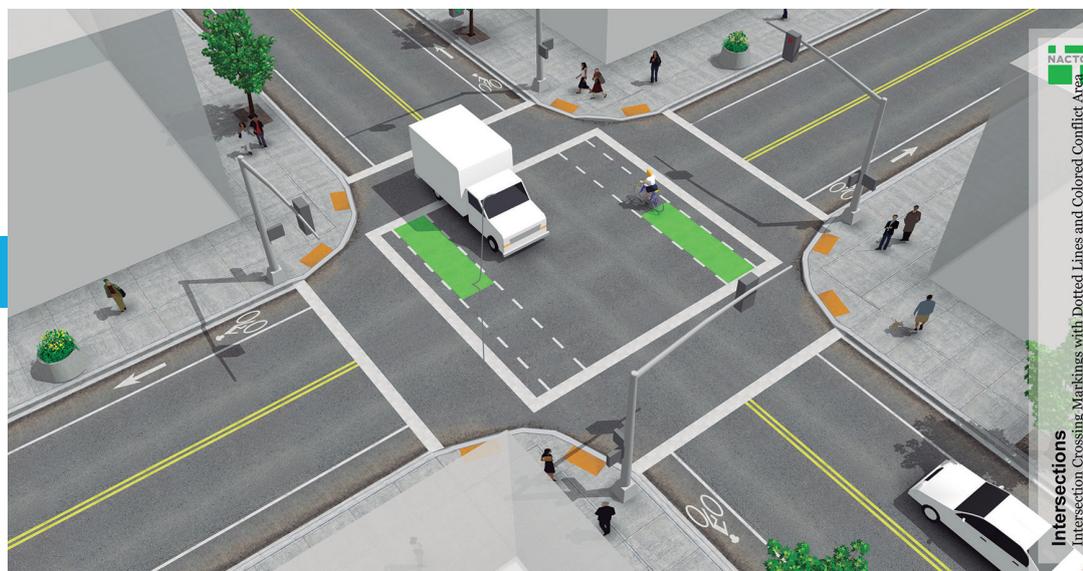
Key Issue: Technology and planning

The NACTO guide utilized web-based planning, communications and social media tools to develop a living document. The project consultants and study review team members were able to share experiences from real projects, document their innovations and collaboratively produce a document quickly and efficiently. Joe Gilpin, who served as Alta's project manager for the NACTO guide, worked with Open Plans to utilize Base Camp on-line project management and file sharing tools. Designer Nick Falbo of Alta utilized Google Earth and 3D Sketchup software to create photo-realistic images for the document based on real projects being developed by the partner cities. Each treatment developed in the guide was shared with the study review team, who linked innovative treatments and best practices from real projects to the project website. This process enabled NACTO to create a new type of on-line, graphically based, web-based guide in less than one year from concept to completion.



Bike box at a signalized intersection (intelligible) a bike lane approach. NACTO guide

Intersection crossing markings with dotted lines and colored conflict areas NACTO guide





Graphic Courtesy of Alta Planning + Design
 One - way protected cycle track with raised curb and parking buffer. Nacto guide

The NACTO Guide features realistic 3D graphics for innovative treatments including bike boxes, intersection markings and cycle tracks.” These graphics include real examples and photographs of projects that have been implemented in the NACTO cities. For example, below are both a 3D graphic and a photo of a one-way cycle track from the NACTO Guide:

Key issue: Separate but equal design.

As the bicycling movement has evolved, the types of facilities being implemented have changed. In the 1990s, the U.S. design guidelines were based on primarily three types of bikeways: separated bike paths, signed bike routes on roadways, and designated bike lanes. These facilities were primarily oriented to skilled, adult, male cyclists who made up the existing American cycling population. At the same time in Amsterdam, Copenhagen, Montreal and other progressive cities, bikeway design became increasingly oriented to separating bicyclists from motorised and pedestrian traffic. Urban designs including cycle tracks, bike boxes, coloured pavements at intersections, dedicated bicycle signals



Photo: NYCDOT/NACTO

and other innovative treatments were developed. Since these treatments were perceived as safer and easier to use by a wide cross section of the population (especially women, children and seniors), they supported a larger and more diverse range of bicyclists. The NACTO guide represents a major shift towards implementing these types of 'separate but equal' treatments in American cities.

Key issue: Sharing best practices globally

The world's cities are rapidly learning to share information and ideas in new ways. The NACTO guide symbolises a greater level of collaboration for cities around the world. The involvement of international members of the consulting team provided support for innovation and the exchange of ideas. This process can be repeated in other countries, cities and places that are working to create active communities where bicycling is safe, healthy and fun. NACTO has created a new level of collaboration in the U.S. bicycling community. There is now an ongoing series of NACTO Cities for Cycling Road Show events to promote innovation in urban mobility. The NACTO guide and the process that was used to create it can be a model for using technology creatively, promoting innovative design and sharing best practices around the world. If we work together, we can make the world a better place for bicycling, for cities, and for future generations.

The NACTO Guide Study Review Team included bicycle design practitioners from throughout the U.S. Alta Planning + Design was the lead consultant for the NACTO Guide, along with an international team of design professionals. A link to the lists people and organizations involved in this project is included in the references section of this article.

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