Trends in the Human Environment: Streamlining and Stewardship

Shari Schaftlein, Director, Office of Human Environment
July 20, 2017
U.S. DOT Priorities:

• Safety
• Accelerated Project Delivery
• Technology Advancements

What is the relationship of Human Environment Stewardship to these priorities?
FHWA Program Areas

- Context Sensitive Solutions
- Environmental Justice
- Quality of Life/Livability
- Multimodal System Planning
- Connectivity
- Economic Development
- Sustainability and Resilience
- Transportation Planning and Health
CSS Overview

- Flexible and creative transportation solutions
- Collaboration and consensus based decision making
- Internal and external stakeholder involvement
- Preserving and enhancing resources
- Physical setting (contextually appropriate design)
- Performance measures - timely project delivery
CSS Targeted Technical Assistance

- Delaware
- Florida
- Idaho
- Minneapolis
- North Dakota
- Washington
Other CSS Activities

• New CSS Website
• CSS Working Group
• CSS Brochure
• Walkable Thoroughfares Guide Update (ITE)
CSS and Rural Areas

- Context Sensitive Solutions (CSS) in Practice Brochure
  - [https://www.fhwa.dot.gov/livability/resources/cssbrochure.cfm](https://www.fhwa.dot.gov/livability/resources/cssbrochure.cfm)

- Using Active Transportation and Context Sensitive Solutions to Enhance Livability in Rural Communities and Small Towns Webinar

- Case Studies
Connectivity/Multimodal Performance Measures

“Guide to Performance Management: The why and how of measuring access to opportunity.”

Key Elements Noted in Guidebook:

- **Access to Opportunity**: Transportation networks that enable all members of a community to get to essential services.

- **Transportation Equity**: Reliable transportation that can meet the needs of all, particularly in traditionally underserved communities.

- **Prioritizing Projects for Funding**: This method allows transportation officials to identify priorities for the investment of limited funds.

- **Types of Data Used in Measuring Access to Opportunity**: Outcome of this method can assist transportation agencies to identify major destination trends in a region.
Next Steps

US DOT Office of Secretary has provided funding to EPA for Governors Institute of Community Design (GICD) to complete two tasks.

- **Task 1** will focus on assistance to a state for connectivity/multimodality/livability performance management.
  - Confirmed State: Utah

- **Task 2** is geared towards implementing Section 1442 of the FAST Act.
  - Confirmed States: Tennessee and Pennsylvania. Six other states will be determined at a later date.
Community Connections

Focuses on urban, suburban, and rural communities divided by past transportation investments and experiencing gaps in existing transportation infrastructure and services.

11th Street Bridge, Washington, DC. Photo courtesy of FHWA.
Community Connections

Promotes performance management approaches for planning, project development, and design that support:

- System connectivity
- Community revitalization
- Public health
- Safety

SR 520 Eastside Transit and HOV Project, Hunts Point, WA, photo courtesy of WSDOT.
EDC is a partnership between FHWA and States to promote innovative tools and practices that:

- Shorten the project delivery process
- Improve environmental sustainability
- Enhance roadway safety
- Reduce congestion

Photos courtesy of USDOT.
Tools and Strategies

Analytical Tools

- Geographic Information Systems
- PlanWorks
- Bicycle and Pedestrian Assessments
- Community Impact Assessments
- Community Benefits Assessments
- Environmental Justice Analyses

every day counts
An Innovation Partnership with States

U.S. Department of Transportation
Federal Highway Administration

PlanWorks
Tools and Strategies

Public Involvement Strategies

Context Sensitive Solutions
Design Charrettes
Interviews with Community Leaders
Community Advisory Groups
Meetings in Community Spaces
Visualizations
Social Media
Tools and Strategies

Planning and Design Techniques

- Scenario Planning and Visualizations
- Context-Sensitive Solutions
- Planning and Environmental Linkages
- Performance-Based Practical Design
Tools and Strategies

Operational Improvements

- Road Diets
- Shared Mobility Services
- Improved Transit Service
- Transit User Accommodations
- Transit First-Mile, Last-Mile Connections

Road Before

Road After

LATEST DESIGN
Widens sidewalks and bike lanes, removes one outbound vehicle lane.

EXISTING DIMENSIONS
Midbridge, looking toward Cambridge

SOURCE: MassDOT

David Butler, Javier Zurita

U.S. Department of Transportation
Federal Highway Administration

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Handbook and Case Studies

**Handbook** for transportation agencies on how to use the toolbox for planning, project development, and design

**Case studies** on projects in urban, suburban, and rural communities where transportation agencies used tools and strategies to advance Community Connections considerations
The line graph illustrates the number of crash fatalities from 2005 to 2015, distinguishing between all crash fatalities, pedestrians, and bicyclists.

- **All Crash Fatalities**:
  - 2005: 43,510
  - 2015: 35,092

- **Pedestrians**:
  - 2005: 4,892
  - 2015: 5,376

- **Bicyclists**:
  - 2005: 786
  - 2015: 818

The data shows a general trend of decline in all crash fatalities from 2005 to 2015, with the greatest decline occurring in the early years. Pedestrian fatalities also show a decline, while bicyclist fatalities show a slight increase.
Recent FHWA Pedestrian and Bicycle Resources
MUTCD - Interim Approval for Optional Use of Two-Stage Bicycle Turn Boxes (IA-20)

Memorandum

Subject: INFORMATION: MUTCD – Interim Approval for Optional Use of Two-Stage Bicycle Turn Boxes (IA-20)

Date: JUL 11, 2017

From: Martin C. Knopp

Associate Administrator for Operations

In Reply Refer To: ROTO-1

To: Federal Lands Highway Division Directors
Division Administrators

Purpose: The purpose of this memorandum is to issue an Interim Approval for the optional use of two-stage bicycle turn boxes. Interim Approval allows interim use, pending official rulemaking, of a new traffic control device, a revision to the application or manner of use of an existing traffic control device, or a provision not specifically described in the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD). State and local agencies must request and receive permission from the Federal Highway Administration (FHWA) in accordance with the provisions of Section 1A.10 of the MUTCD before they can apply the optional device or application described in this Interim Approval.

Background: The standard design of on-street bicycle lanes has placed these lanes to the right side of the general travel lanes. Left-turn movements from such bicycle lanes can sometimes be challenging, with more bicycle lanes being placed on multi-lane roadways, the increasing use of physically-separated bicycle lanes, and an increase in urban rail systems that might require a bicyclist to cross tracks at a shallow angle. The Federal Highway Administration has been requested by stakeholders to provide traffic control devices to facilitate alternative methods for bicyclists on the left side of traffic to turn left (or right if the facility is located to the left of the general travel lanes) without either being able to merge across a physical barrier or facing a difficult merge across multiple lanes of potentially higher-speed traffic. The two-stage bicycle turn box might also encourage bicyclists to stay within on-street bicycle facilities rather than using the sidewalks and crosswalks around intersections, thus reducing conflicts with pedestrians.

The two-stage bicycle turn box is an area set aside for bicyclists to queue to turn at a signalized intersection outside of the traveled path of motor vehicles and other bicycles. When using a two-stage bicycle turn box to make a left turn, a bicyclist would proceed on a green signal indication to the turn box on the right-hand side of the travel lanes, then turn left within the turn box and wait for the appropriate signal indication on the cross street to proceed. Two-stage bicycle turn boxes can also be used with a left-side bicycle facility to facilitate bicyclists turning right. In addition to mitigating conflicts inherent in merging across traffic to turn, two-stage bicycle turn boxes reduce conflicts between bicyclists and pedestrians and separate queued bicyclists waiting to turn from through bicyclists moving on the green signal.
Filling Gaps – FHWA Resources in Development

• Scalable Risk Assessment Methodology
• Bike Facility Selection Guide
• Measuring Multimodal Network Connectivity
• Innovative Roadway Design and Accessibility
Key Messages

- FHWA Focus On
  - Safety for all users
  - Connected pedestrian and bicycle networks
  - Design flexibility
  - Accelerated project delivery
  - Data to improve the planning process

- High Demand for Updated National Multimodal Planning and Design Resources
  - AASHTO Guide for the Development of Bicycle Facilities
  - AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
EJ and Rural Areas

- Developing and Advancing Effective Public Involvement and Environmental Justice Strategies for Rural and Small Communities

- Environmental Justice Analysis in Transportation Planning and Programming (In Development)

- Fundamentals of EJ Web-based Course (Coming Soon to National Highway Institute)

- Advanced EJ Analysis Course (In Development)

- Case Studies:
Evolving Terminology for Human Environment Stewardship

- Connectivity
- Livability/Quality of Life
- Transportation Alternatives /Bicycle and Pedestrian
- Context Sensitive Solutions /Design
- Economic Development/Revitalization
- Sustainability and Resiliency
- Community Impact Assessments
- Design Flexibility
- Performance Management/Performance Based Practical Design
- Walkable Multimodal Thoroughfares
- Safe and affordable transportation choices
- Civil Rights/non-discrimination
- Environmental Justice
Transportation and Livability

• Better integration of multimodal transportation infrastructure and facilities
• Expand opportunities for economic development
• Provide safe and adequate accommodations for all users
• Increase community connectivity and cohesion
• Capitalize on the value of existing (context sensitive) community amenities
• Enhance access to jobs, schools, and other services
• Help improve overall quality of life
# Urban/Rural Resources

<table>
<thead>
<tr>
<th>Resource</th>
<th>Urban</th>
<th>Rural</th>
<th>Dually Applicable</th>
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<tbody>
<tr>
<td><em>Developing and Advancing Effective Public Involvement and Environmental Justice Strategies for Rural and Small Communities</em></td>
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<td><em>Small Town and Rural Multimodal Networks</em></td>
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<td><em>Innovative Street Design Practices and Accessibility (In Progress)</em></td>
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<td><em>Best Planning Practices: Metropolitan Transportation Plans</em></td>
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<tr>
<td><em>Environmental Justice Analysis in Transportation Planning and Programming, State of the Practice (In Progress)</em></td>
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<td><em>The Why and How of Measuring Access to Opportunity</em></td>
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Transportation and Livability Resources

Foundational
• Livability in Transportation Guidebook
• The Role of FHWA Programs in Livability
• Creating Livable Communities Report
• Regional Livability Workshop Summaries

Recent
• Updated Case Studies
• Best Practice Videos

Work in Progress
• Community Impact Assessment Guidebook Update
• Community Connections, EDC-4
Human Environment Newsletters

Human Environment Digest

April 6, 2017

PDF files can be viewed with the Acrobat Reader.

Welcome to the Federal Highway Administration (FHWA) Office of Human Environment weekly email digest. This digest shares the latest information from a range of Federal and non-Federal sources, addressing transportation and its relationship to the human environment. Through this information exchange, FHWA hopes to foster dialogue at all levels and continue to further the state of the practice on these important topics.

For more information on any of these topics, see the FHWA Related Links on the sidebar.

*The information provided in this mailing does not necessarily reflect the view of the Federal Highway Administration or the U.S. Department of Transportation.

Contents:
- Announcements
- Bicycle/Pedestrian
- Livability

Announcements

16th TRB National Transportation Planning Applications Conference: Early Bird Registration Closes April 13th

The Transportation Research Board (TRB) will sponsor the 16th TRB National Transportation Planning Applications Conference on May 14-18, 2017, in Raleigh, North Carolina. The conference will provide opportunities to showcase new transportation planning techniques and methods emphasizing practical, innovative, and timely technical and policy approaches to transportation planning. Register by April 13, 2017 to qualify for the Early Bird Registration Rate.

For more information about events and webinars, see the HEP Calendar.

Events

- April 23-25, 2017: Local Leadership Summit: P3 is for Partnership, Placemaking, and Policy, Washington, DC. (There is a fee)
- May 1-3, 2017: Main Street America, Pittsburgh, PA. (There is a fee)
- May 7-10, 2017: 23rd International Trails Symposium, Dayton, OH. (There is a fee)
- May 9, 2017: National Association of City Transportation Officials: Gree Streets, Complete Streets. New York, NY
- May 14-18, 2017: 2017 International Conference on Ecology and Transportation: Salt Lake City, UT. (There is a fee)
- July 31-August 4, 2017: IBF’s Comprehensive Bikeway Design 2.0. Portland, OR. (There is a fee)
- August 20-24, 2017: IBF’s Comprehensive Bikeway Design 1.0. Portland, OR. (There is a fee)

Webinars

- April 12, 2017: 2:00 – 3:30 PM ET: FHWA’s Incorporating Context Sensitive Solutions and Environmental Justice to Enhance Livability
- April 12, 2017: 2:00 – 3:30 PM ET: FHWA’s Incorporating Context Sensitive Solutions and Environmental Justice to Enhance Livability

http://www.fhwa.dot.gov/livability/he_digest

https://www.fhwa.dot.gov/livability/newsletter/
Economic Development Resources

• FHWA Economic Development Case Studies
• Supporting Economic Development with Highway Investment Report (Nov 2015)
• EconWorks (Economic Impacts Analysis), Webinar Series
• The Conservation Leadership Network Courses

“Transportation should play a significant role in promoting economic growth, improving the environment, and sustaining quality of life.” Declaration of Policy, 23 USC 101

(http://www.conservationfund.org/what-we-do/conservation-leadership-network/upcoming-courses)
National Systems and Economic Development Updates

Meetings
• Met with U.S. EDA HQ and field staff and other Federal agency reps on July 13 to discuss aligning Federal resources

Webinars
• Understanding Local and Regional Economic Development - October 11, 2-3:30 p.m.
• FHWA/FTA - Value Capture and Transportation Projects - September 27th, 2-3:30 p.m.

Workshops
• USDOT Internal Shared Mobility/Mobility on Demand Work (Fall 2017)

Conferences
• I-TED 2018: International Transportation Economic Development, June 6-8, in D.C.

Research
• Economic Development Benefits of Highway Right-Sizing
• Site Selection Factors Along Economic Development Corridors

Ongoing
• NCHRP 19-13 Value Capture Toolkit

Working Groups
• Economic Development
• Shared Mobility
State and Local Coordination

- Over 1,200 participating Communities
- Over $17 billion dollars in federal resources
- 15 Federal agencies administering Place-based Initiative programs
- Increased interagency planning (and a number of potentially duplicative interagency structures)
Transportation Planning and Health

- Framework for Better Integrating Health into Transportation Corridor Planning
- Transportation and Health Tool (THT)
Transportation Equity

- Congestion Pricing and Tolling
- Multimodal Access
- Transportation Investment Analysis: shared benefits and negative impacts
Program Websites

- Livability:
  http://www.fhwa.dot.gov/livability

- Environmental Justice:
  http://www.fhwa.dot.gov/environment/environmental_justice

- Bicycle and Pedestrian:
  http://www.fhwa.dot.gov/environment/bicycle_pedestrian/index.cfm

- Economic Development:
  https://www.fhwa.dot.gov/planning/economic_development/

- Sustainable Transportation:
  https://www.fhwa.dot.gov/environment/sustainability/

- Community Connections:
  https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/connections.cfm

- Health in Transportation:
  https://www.fhwa.dot.gov/planning/health_in_transportation/