Small Town and Rural Multimodal Networks

APA Planning Webcast Series

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Project Team

alta MONTANA STATE UNIVERSITY Western Transportation Institute NACO National Association of Counties
Outline

• Purpose
• Structure
• Sources
• Applications
• Benefits
• Project Examples

Small Town and Rural Multimodal Networks

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Federal Highway Administration
History and Context
Rural Practice and Multimodal Design Guidelines
Where did the guide come from - Sources

- AASHTO Flexibility Guide 2004
- AASHTO Bike Guide 2012
- AASHTO Green Book 2011
- AASHTO Low Volume Roads 2001, 2017
- FHWA Achieving Multimodal Networks 2016
- FHWA Resurfacing Guide 2016
- FHWA MUTCD 2009
- FHWA Separated Bike Lane Guide 2015
- PROWAG 2011, 2013, 2014
- BIKESAFE 2014
“Walking and bicycling foster safer, more livable, family-friendly communities; promote physical activity and health; and reduce vehicle emissions and fuel use.”

“... DOT encourages transportation agencies to go beyond the minimum requirements, and proactively provide convenient, safe, and context-sensitive facilities that foster increased use by bicyclists and pedestrians of all ages and abilities...”

United States Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations

Signed on March 11, 2010 and announced March 15, 2010

Purpose

The United States Department of Transportation (DOT) is providing this Policy Statement to reflect the Department's support for the development of fully integrated active transportation networks. The establishment of well-connected walking and bicycling networks is an important component for livable communities, and their design should be a part of Federal-aid project developments. Walking and bicycling foster safer, more livable, family-friendly communities; promote physical activity and health; and reduce vehicle emissions and fuel use. Legislation and regulations exist that require inclusion of bicycle and pedestrian facilities and projects into transportation plans and project development. Accordingly, transportation agencies should plan, fund, and implement improvements to their walking and bicycling networks, including linkages to transit. In addition, DOT encourages transportation agencies to go beyond the minimum requirements, and proactively provide convenient, safe, and context-sensitive facilities that foster increased use by bicyclists and pedestrians of all ages and abilities, and utilize universal design characteristics when appropriate. Transportation programs and facilities should accommodate people of all ages and abilities, including people too young to drive, people who cannot drive, and people who choose not to drive.

Policy Statement

The DOT policy is to incorporate safe and convenient walking and bicycling facilities into transportation projects. Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. Because of the numerous individual and community benefits that walking and bicycling provide — including health, safety, environmental, transportation, and quality of life — transportation agencies are encouraged to go beyond minimum standards to provide safe and convenient facilities for these modes.

Authority

This policy is based on various sections in the United States Code (U.S.C.) and the Code of Federal Regulations (CFR) in Title 23—Highways, Title 49—Transportation, and Title 42—The Public Health and Welfare. These sections, provided in the Appendix, describe how bicyclists and pedestrians of all abilities should be involved throughout the planning process, should not be adversely affected by other transportation projects, and should be able to track annual obligations and expenditures on nonmotorized transportation facilities.
FHWA supports “taking a flexible approach to bicycle and pedestrian facility design. ... The National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide, [the Urban Street Design Guide,] and the Institute of Transportation Engineers (ITE) Designing Walkable Urban Thoroughfares guide builds upon the flexibilities provided in the AASHTO guides, which can help communities plan and design safe and convenient facilities for pedestrian and bicyclists. FHWA supports the use of these resources to further develop nonmotorized transportation networks, particularly in urban areas.”
Why Create a Small Town Guide?

ONE SIZE DOES NOT FIT ALL.

- Longer non-local trip distances
- Health disparities
- Higher crash rates
- Income disparities
Rural Opportunities

Allendale, SC
Population 3,328

Palmer, AK
Population 6,250

Rushford, MN
Population 2,102

Ukiah, CA
Population 15,956
Guide Content

Treatments and Design Topics
Guide Structure

1. Introduction
2. Mixed Transportation Facilities
3. Visually Separated Facilities
4. Physically Separated Facilities
5. Key Network Linkages
6. Planning and Project Development

<table>
<thead>
<tr>
<th>Contents</th>
<th>Table of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1-Introduction</td>
<td>Chapter 4-Physically Separated Facilities</td>
</tr>
<tr>
<td>1-5 Why a Rural and Small Town Focused Guide?</td>
<td>4-3 Shared Use Path</td>
</tr>
<tr>
<td>1-7 Building a Rural and Small Town Multimodal Network</td>
<td>4-11 Sidewalk</td>
</tr>
<tr>
<td>1-8 Who Uses the Rural Network?</td>
<td>4-19 Sidewalk</td>
</tr>
<tr>
<td>1-9 How to Use this Guide</td>
<td>4-25 Separated Bike Lane</td>
</tr>
<tr>
<td>1-11 Creating Networks</td>
<td></td>
</tr>
<tr>
<td>1-13 Common Challenges in Small Town and Rural Areas</td>
<td></td>
</tr>
<tr>
<td>1-15 Reference Guide</td>
<td></td>
</tr>
<tr>
<td>1-16 Accessibility Standards</td>
<td></td>
</tr>
<tr>
<td>Chapter 2-Mixed Traffic Facilities</td>
<td>Chapter 5-Key Network Opportunities</td>
</tr>
<tr>
<td>2-3 Yield Roadway</td>
<td>5-3 Speed Management</td>
</tr>
<tr>
<td>2-9 Bicycle Boulevard</td>
<td>5-7 Pedestrian Lane</td>
</tr>
<tr>
<td>2-17 Advisory Shoulder</td>
<td>5-9 School Connections</td>
</tr>
<tr>
<td>Chapter 3-Visually Separated Facilities</td>
<td>5-15 Multimodal Main Streets</td>
</tr>
<tr>
<td>3-3 Paved Shoulder</td>
<td>5-21 Bridges</td>
</tr>
<tr>
<td>3-11 Bike Lane</td>
<td>5-27 Access to Public Lands</td>
</tr>
<tr>
<td>Chapter 6-Planning and Project Development</td>
<td></td>
</tr>
<tr>
<td>6-3 The Transportation Planning Process</td>
<td></td>
</tr>
<tr>
<td>6-4 Steps in the Transportation Planning Process</td>
<td></td>
</tr>
<tr>
<td>6-5 Key Products in the Transportation Planning Process</td>
<td></td>
</tr>
<tr>
<td>6-6 What are the Key Products of the Transportation Planning Process?</td>
<td></td>
</tr>
</tbody>
</table>
Content Areas

- Application
- Benefits
- Guidance
  - Geometric Design
  - Markings
  - Signs
  - Intersection treatment
  - Implementation
  - Accessibility
Content Areas - Case Studies

• Community Context
• Key Elements
• Role in the Network
• How Funded
Applications

Mixed Traffic
Visually Separated
Physically Separated
Focus on Complete Networks of Facilities

Networks are interconnected pedestrian and/or bicycle transportation facilities that allow people of all ages and abilities to safely and conveniently get where they want to go.

Facility Categories:
- Mixed Traffic
- Visually Separated
- Physically Separated
Varying Context and User Needs
Speed and Volume
Most appropriate on streets with low to moderate volumes and moderate speed motor vehicles.  

Network
Applies to constrained connections between built-up areas.  

Land Use
For use outside, between and within built-up areas with bicycle and pedestrian demand and limited available paved roadway surface.
Mixed Traffic

• Yield Roadway
• Bicycle Boulevard
• Advisory Shoulder
Yield Roadway
Facilities

Mixed Traffic
- Yield Roadway
- Bicycle Boulevard
- Advisory Shoulder

Visually Separated
- Paved Shoulder
- Bike Lane

Physically Separated
- Shared Use Path
- Sidepath
- Sidewalk
- Separated Bike Lane

Figure 4-18. Separated bike lanes may be separated by an unpaved roadway separation, and a vertical element. When configured as directional facilities, separated bike lanes should be provided on both sides of the roadway.

Figure 4-19. Separated bike lanes may be configured on an existing roadway surface by using a physical barrier such as a curb or median to separate the bikeway from the roadway.
Yield Roadway

• Designed to serve pedestrians, bicyclists, and motorists in a shared, slow-speed traveled way.

• Bi-directional, no lane markings.
North Richland Hills, TX
Population 67,000
Bicycle Boulevard

- Low-stress shared roadway bicycle facility, designed to offer priority movement for bicyclists
- Combine pavement markings, traffic calming measures, and crossing improvements to enhance bicyclist comfort
Wildwood, MO
Population 35,000
Advisory Shoulder
Advisory Shoulder

- Establishes a shoulder on an otherwise too narrow road
- Delineated by pavement markings
- Colored pavement optional
- Must exit shoulder to overtake bicyclists
- Must enter shoulder when yielding to oncoming traffic
Advisory Shoulder

• Establishes a shoulder on an otherwise too narrow road
• Delineated by pavement markings
• Colored pavement optional
• Must exit shoulder to overtake bicyclists
• Must enter shoulder when yielding to oncoming traffic
Norman, OK Pop. 118,000
Norman, OK Pop. 118,000

ASP AVENUE: PROPOSED CROSS SECTIONS (2 of 2)
Norman, OK
Population 110,925
Paved Shoulder
Paved Shoulder

Paved shoulders on the edge of roadways can be enhanced to serve as a functional space for bicyclists and pedestrians to travel in the absence of other facilities with more separation.

Appropriately on roads with moderate to high volumes and speeds and on roadways with a large amount of truck traffic. May function as multimodal road with heavy traffic but fails to provide a low-stress experience in this condition.

Network

1. Long-distance and regional travel

Land Use

Appropriate outside of urban built-up areas, near school zones and transit locations, and where there is unexpected pedestrian and bicycle activity. Walkable shoulders should be provided along both sides of county roads and highways routinely used by pedestrians.
Lake St. Louis, MO Pop. 14,831

Rte. 100 - Wildwood, MO - Pop. 35,000
Bike Lane

Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and optional signs. A bike lane is located directly adjacent to motor vehicle travel lanes and follows the same direction as motor vehicle traffic.
Old Rte. 66 in Wildwood, MO
Population: 35,000
Fish Creek, WI

- Busy, seasonal STH corridor links most popular State Park to Downtown shopping district
- Previous study identifies potential for converting parking to on-street bike path
Proposed Demonstration:

• Create a mixed facility loop
• Convert 1 parking lane to seasonal on-street bike lane (demonstration)
Morgan Hill, CA

- 6-month pilot of road diet alternatives
- Temporary pedestrian space & buffered bike lane
- Feedback collected
- Evaluation report
Pedestrian Lane
A **pedestrian lane** is an interim or temporary pedestrian facility that may be appropriate on roads with low to moderate speeds and volumes. The lane may be on one or both sides of the roadway and can fill gaps between important destinations in a community.
Pedestrian Lane

Pedestrian lanes provide interim or temporary pedestrian accommodation on roadways lacking sidewalks. They are not intended to be an alternative to sidewalks and often will fill short gaps between other higher quality facilities. As part of the planning process, agencies should explore issues and the potential challenges a pedestrian lane may face, including:

- Detectability by people with vision disabilities
- Undesired use by bicyclists
- Accessible cross-slope requirements
- Maintenance strategies, such as sweeping and snow removal
Detroit, OR
Population: 200
A sidepath is a bidirectional shared use path located immediately adjacent and parallel to a roadway. Sidepaths can offer a high-quality experience for users of all ages and abilities as compared to on-roadway facilities in heavy traffic environments, allow for reduced roadway crossing distances, and maintain rural and small town community character.
Town and Country, MO
Population: 10,975
South Lake Tahoe, CA
Population: 20,100

Photo by Tahoe Regional Planning Association (TRPA)
A shared use path provides a travel area separate from motorized traffic for bicyclists, pedestrians, skaters, wheelchair users, joggers, and other users. Shared use paths can provide a low-stress experience for a variety of users using the network for transportation or recreation.
Appleton Trails Master Plan
Appleton, WI
Appleton Trails Master Plan
Appleton, WI
Flyway Trail Feasibility Study
Buffalo County, WI

• Crowdfunded study
• Part of Mississippi River Trail (MRT)
• Currently mostly on-street

• Draft alignment, facility type
• Cost estimates
• Funding and administrative structure for implementation
Sidewalks provide dedicated space intended for use by pedestrians that is safe, comfortable, and accessible to all. Sidewalks are physically separated from the roadway by a curb or unpaved buffer space.
Separated Bike Lane
A separated bike lane is a facility for exclusive use by bicyclists that is located within or directly adjacent to the roadway and is physically separated from motor vehicle traffic with a vertical element.
West 3rd Street Protected Bike Lane
Red Wing, MN

Section A

Section B
West 3rd Street Protected Bike Lane
Red Wing, MN
Jackson Hole, WY
Population: 9,600
Network Opportunities

- Speed Management
- Pedestrian Lane
- School Connections
- Multimodal Main Street
- Bridges
- Access to Public Lands
Pedestrian Lanes

- Interim or temporary pedestrian accommodation on roadways lacking sidewalks.
- Not intended to be an alternative to sidewalks and often will fill short gaps between other higher quality facilities.
- Explore issues and the potential challenges a pedestrian lane may face.

Clayton, MO
Pop. 13,000
School Connections

- Schools are key destinations in communities of all sizes.
- This is particularly true in small and rural places, where they often play a prominent role in the community as centers of activity for people of all ages and abilities.
- It is essential to provide separation from motorized traffic, controlled crossings, and wayfinding.
Bridges

• Separation
• Prioritize
• Awareness
• Continuity
• Future Proof
• Flexibility
Access to Public Lands

• Scenic places, sometimes unique need for wayfinding

• Opportunities for more diverse funding sources:
  • Federal Lands Transportation Program (FLTP)
  • Federal Lands Access Program (FLAP)

Colorado Riverway Path near Moab, UT
Population: 5,046
Let’s Get Started!

• Read & review it, it’s free online
  Share it with your colleagues on LinkedIn

• Share with local elected officials
  Attend or host a training (ask us how!)

• Visit or call municipalities that have done projects recently

• Prepare/update a bicycle and pedestrian plan
Let’s Get Started!

• Organize a demonstration project
• Integrate active transportation planning goals and objectives into your comprehensive plan
• Update, revisit, or develop a Complete Streets policy (Planning Advisory Service Report 559 Complete Streets: Best Policy and Implementation Practices)
How to Get the Guide

• PDF copy on FHWA publications page
• Hard copies available soon

• Interactive online guide at ruraldesignguide.com

• Contact Alta Planning + Design for more information
Thank you. Questions?

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