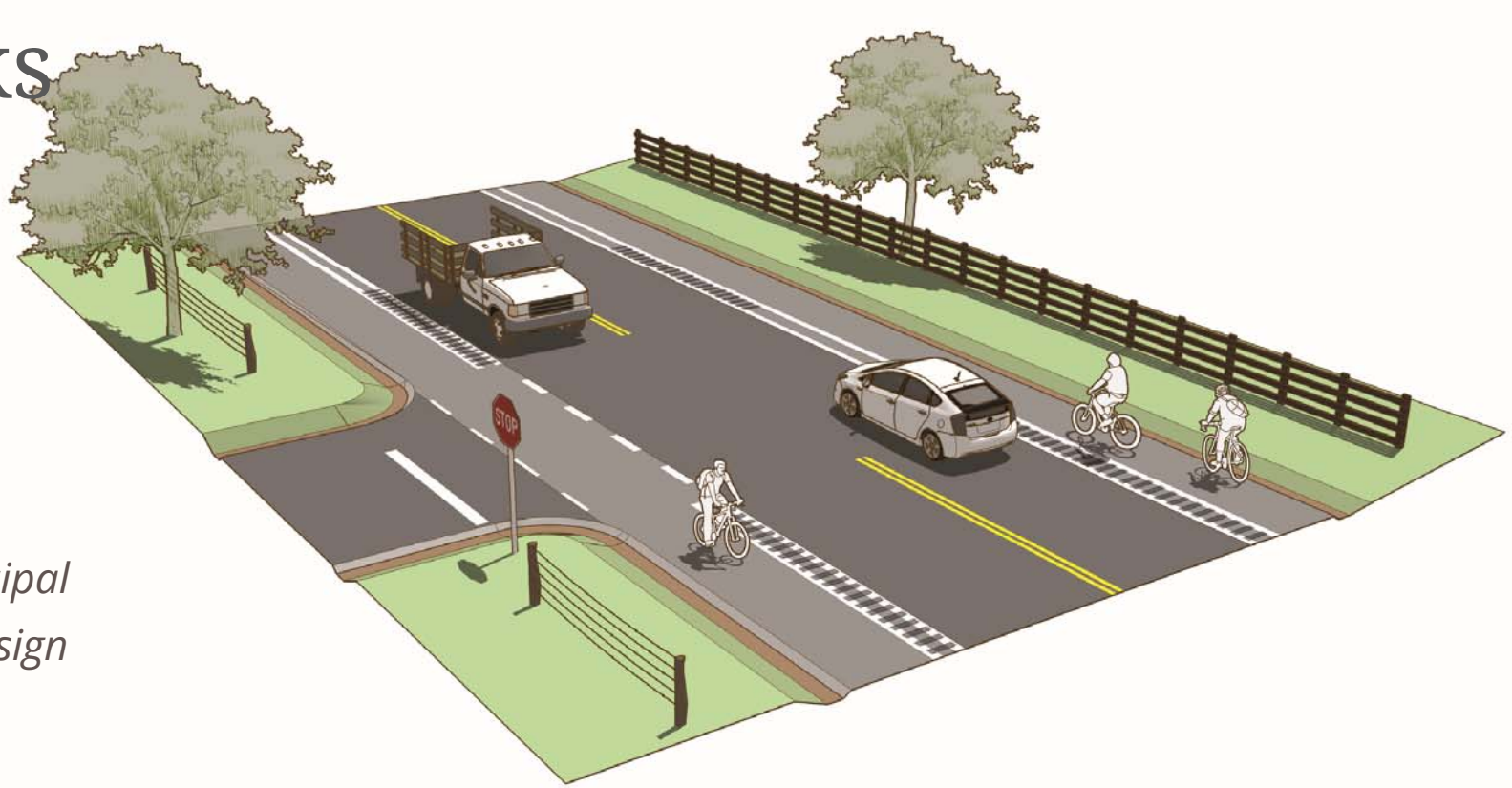
Small Town ***and*** Rural Multimodal Networks

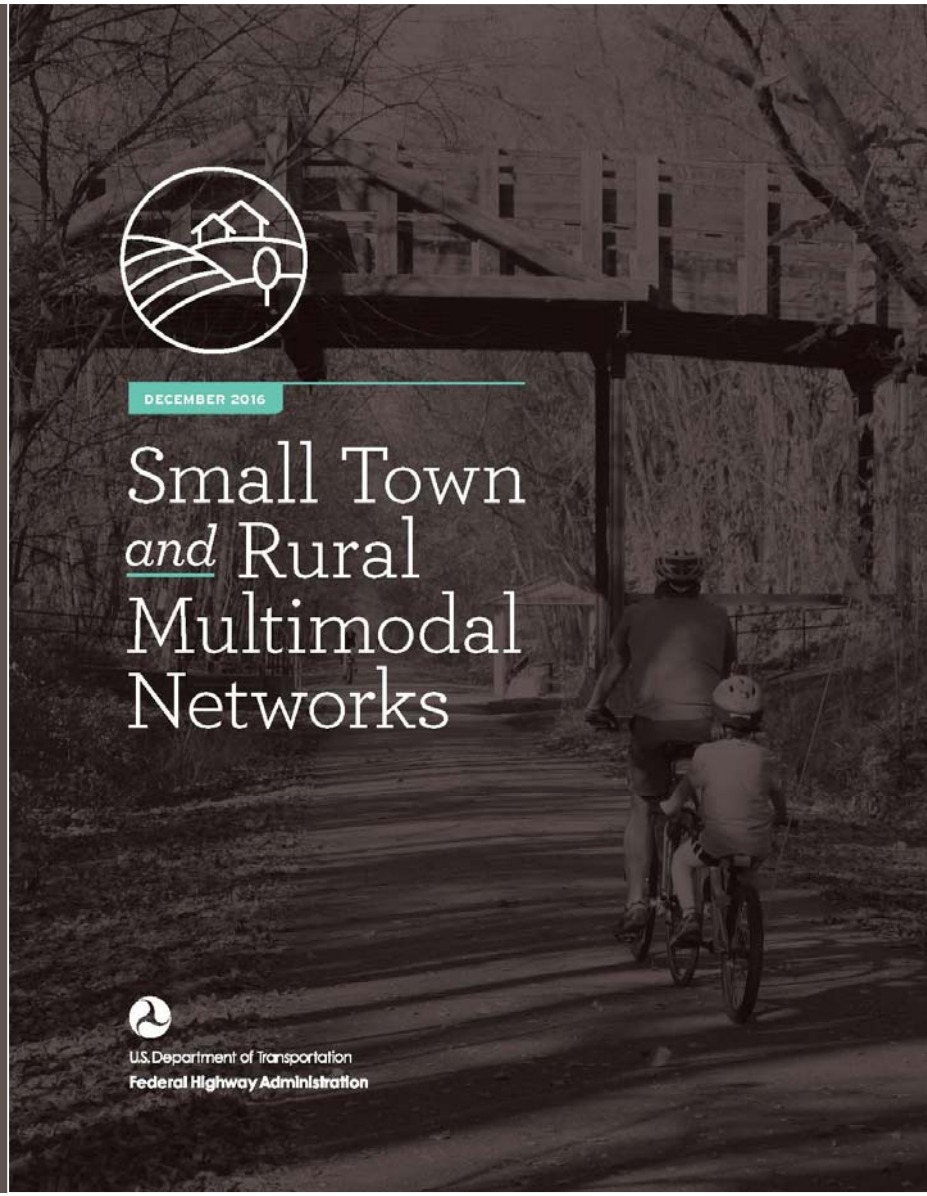


Sam Corbett, Principal

Alta Planning + Design

Outline

- Brief History of Design Flexibility
- Report Content and Facility Types
- Selected Treatments:
  - Advisory Shoulder
  - Pedestrian Lane
  - Sidepath



FHWA Policy Statement (2010)

"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*..."

FHWA. *United States Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations.* 2010.

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 policies 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

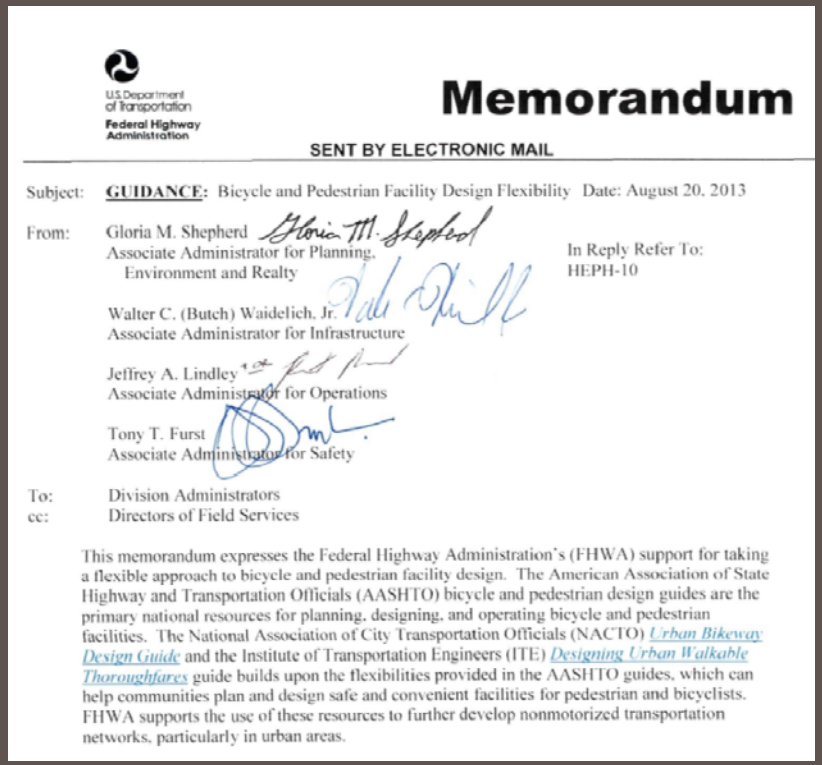
The DOT policy is to incorporate safe and convenient walking and bicycling facilities into transportation projects. Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation 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 Design Flexibility Memo (2013)

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."**



U.S. Department of Transportation
Federal Highway Administration

Memorandum

SENT BY ELECTRONIC MAIL

Subject: **GUIDANCE:** Bicycle and Pedestrian Facility Design Flexibility Date: August 20, 2013

From: Gloria M. Shepherd
Associate Administrator for Planning, Environment and Realty

In Reply Refer To: HEPH-10

Walter C. (Butch) Waidelich, Jr.
Associate Administrator for Infrastructure

Jeffrey A. Lindley
Associate Administrator for Operations

Tony T. Furst
Associate Administrator for Safety

To: Division Administrators
cc: Directors of Field Services

This memorandum expresses the Federal Highway Administration's (FHWA) support for taking a flexible approach to bicycle and pedestrian facility design. The American Association of State Highway and Transportation Officials (AASHTO) bicycle and pedestrian design guides are the primary national resources for planning, designing, and operating bicycle and pedestrian facilities. The National Association of City Transportation Officials (NACTO) *Urban Bikeway Design Guide* and the Institute of Transportation Engineers (ITE) *Designing Urban Walkable 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.

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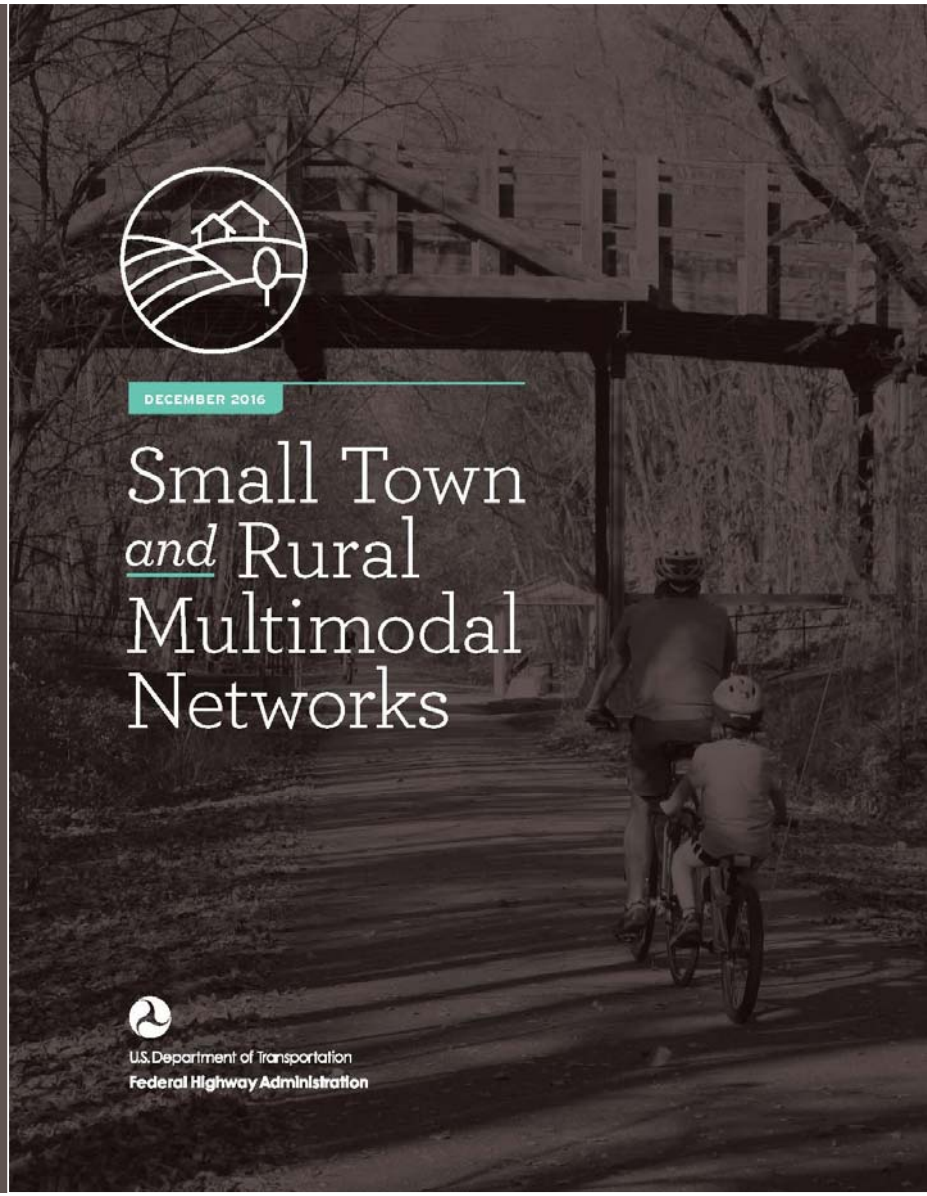
Recent Design Guides Focused on Urban Areas

- ITE Walkable Thoroughfares (2010)
- NACTO Urban Bikeway Design Guide (2012)
- NACTO Urban Street Design Guide (2013)

Small Town and Rural Multimodal Networks (2016)

The multimodal design guidelines for the rest of us.



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 OF

Contents

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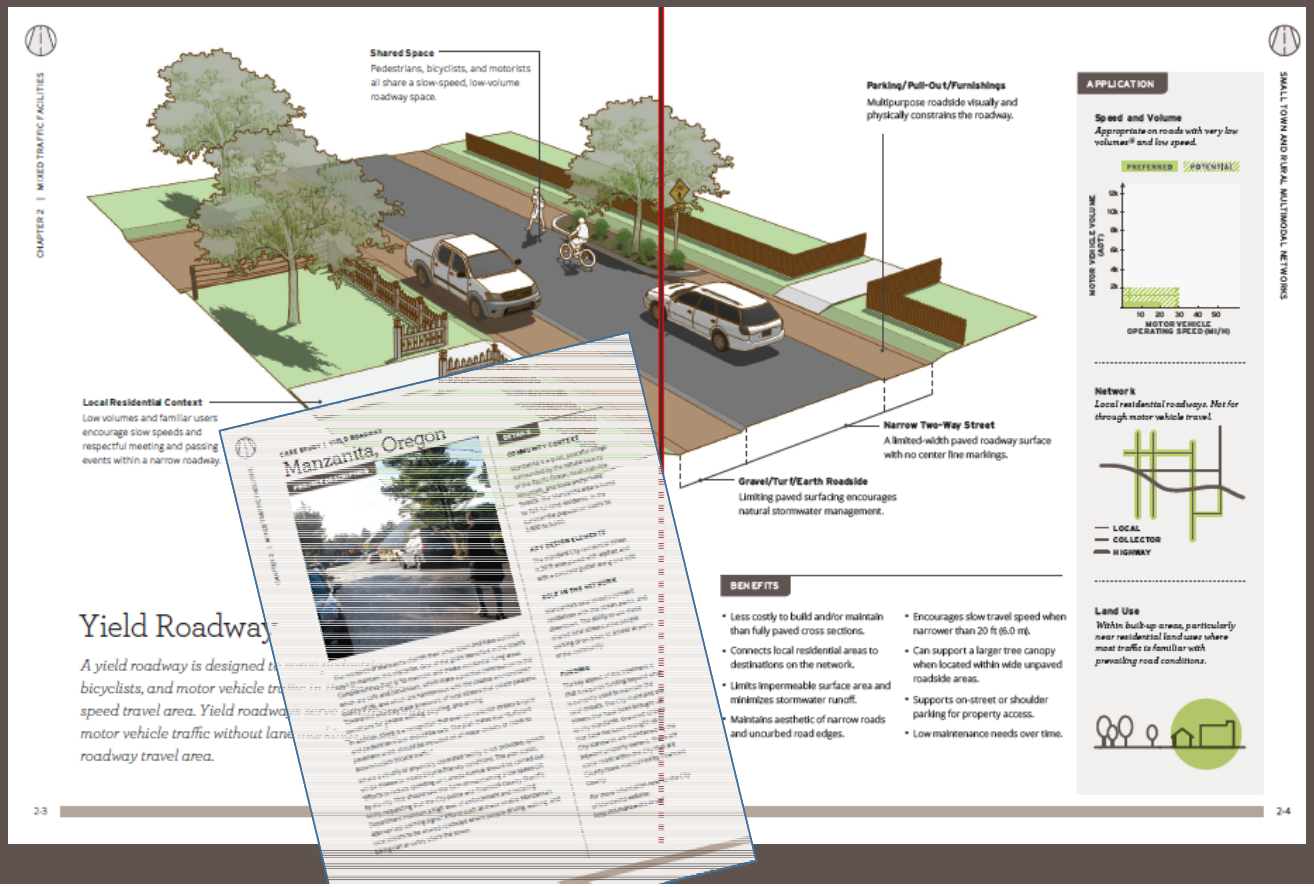
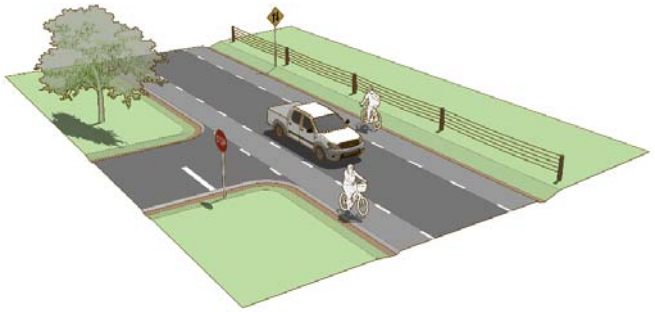
Multimodal Facilities

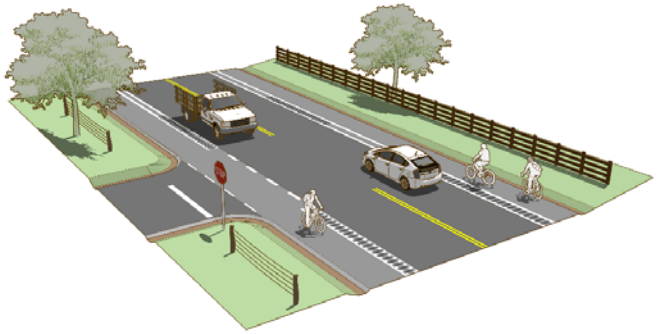
- Application
- Benefits
- Case Studies
- Guidance
  - Geometric Design
  - Markings
  - Signs
  - Intersection treatment
  - Implementation
  - Accessibility



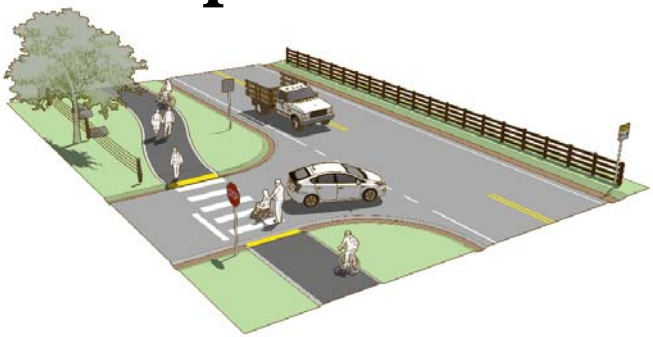
Mixed Traffic

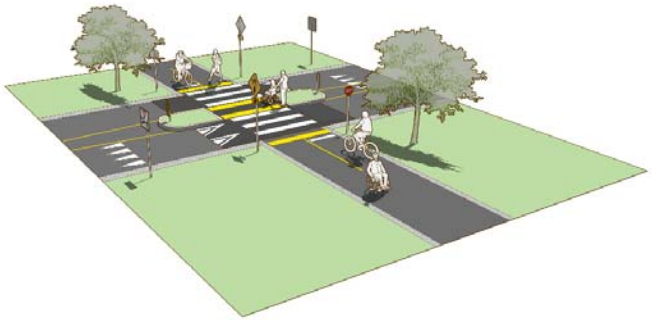


Visually Separated



Physically Separated

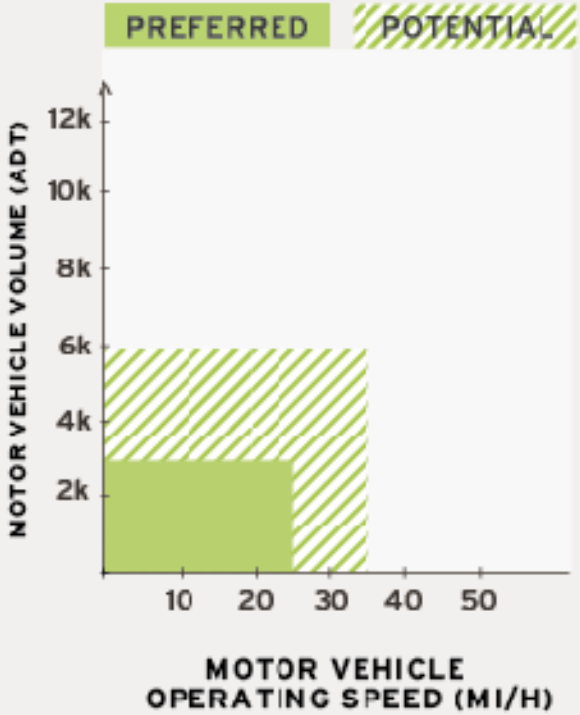




EXAMPLE APPLICATION

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.

Case Studies

Real world examples for all facilities:

- Project background
- Design elements
- Role in the network
- Project funding

CHAPTER 2 | MIXED TRAFFIC FACILITIES

CASE STUDY | YIELD ROADWAY

Manzanita, Oregon

PROJECT DESCRIPTION

The residents of Manzanita cherish their small town and have outlined ways to maintain this character. One of the goals identified in the town's Comprehensive Plan is "to maintain and create residential living areas which are safe and convenient, which make a positive contribution to the quality of life, and which are harmonious with the coastal environment." Toward this end they have a network of local streets that create peaceful conditions for people walking, bicycling, and driving.

In addition, there is a recognition that even on collector streets bicycle and pedestrian travel should be safe. The plan states that "Sufficient pavement width should be included on all major streets or roads to accommodate bicycle traffic."

Where a visually or physically separated facility is not provided, speeds will be slowed to create bicycle-friendly conditions. The plan states, "Efforts to reduce speeding on Laneda Avenue should be carried out by the city. This should take the form of maintaining a low speed (20 MPH), requesting that the City police and Tillamook County Sheriff's Department maintain a high level of enforcement and installing appropriate warning signs." Efforts such as these enable Manzanita's local streets to be shared roadways where people driving, walking, and biking can all safely share the street.

DETAILS

COMMUNITY CONTEXT

Manzanita is a quiet, peaceful village surrounded by the natural beauty of the Pacific Ocean, Neah-Kah-Nie Mountain, and State and private forests. The Manzanita area is home to 725 full time residents. In the summer the population swells to 2,500 to 3,000.

KEY DESIGN ELEMENTS

The standard City residential street is 20 ft wide paved with asphalt and with a concrete gutter along one side.

ROLE IN THE NETWORK

Manzanita's local streets connect residences with the ocean, parks, and downtown. The ability to use these shared local streets allow people walking or on bikes to access all parts of the community.

FUNDING

The key aspect of this treatment is that it requires funding beyond what is currently used to maintain the local streets. The City maintains the streets that have been brought up to city standards. Graveled streets that have not been brought up to City standards are maintained by the adjacent property owners. There are some roads within the City that are County roads maintained by Tillamook County.

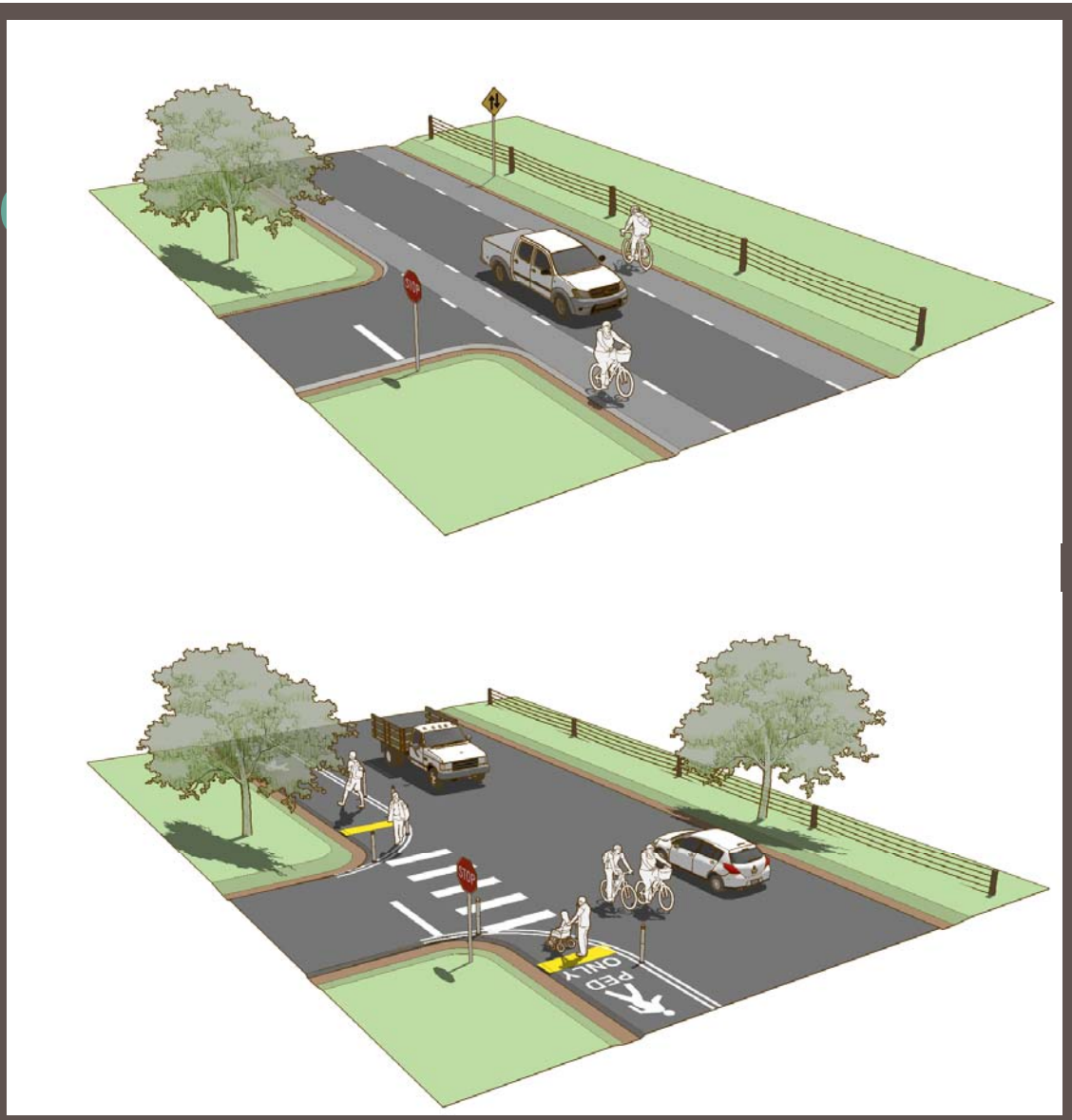
For more information refer to the City of Manzanita website: http://ci.manzanita.or.us/

2-7

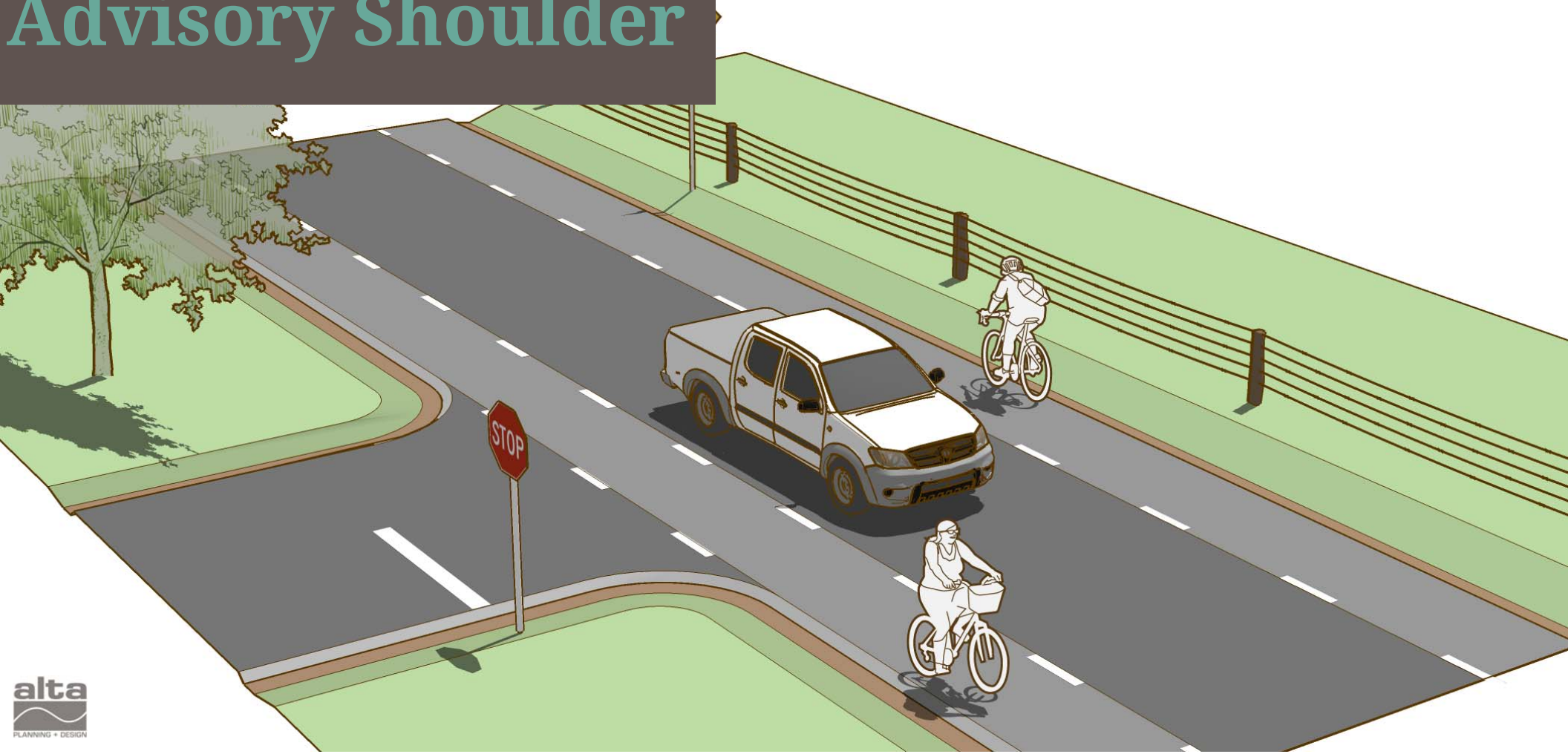
Featured Faciliti

- Advisory Shoulder
- Pedestrian Lane
- Sidepath*

**While not a new facility, design guidance in this publication addresses the transition to bike lanes*



Advisory Shoulder



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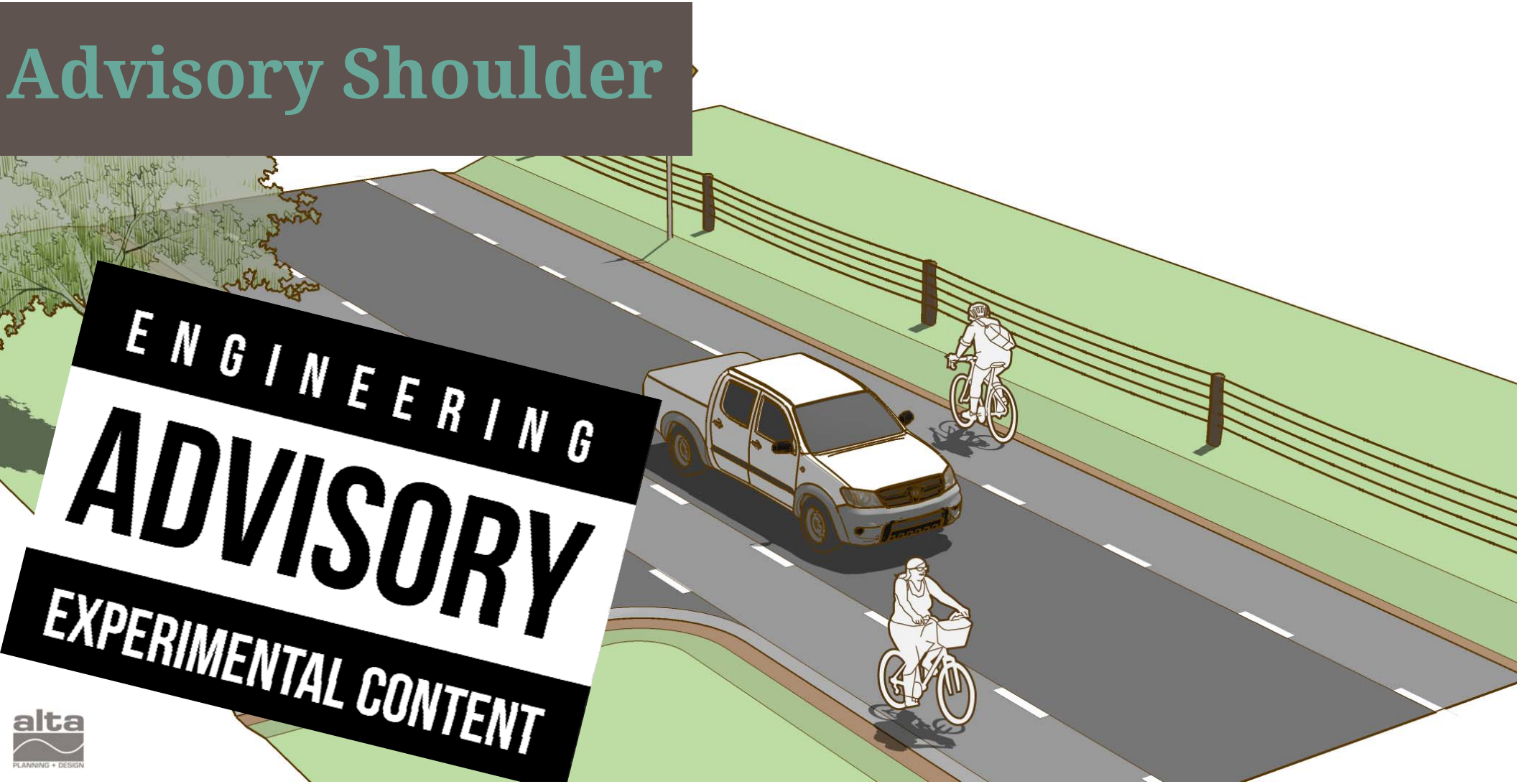
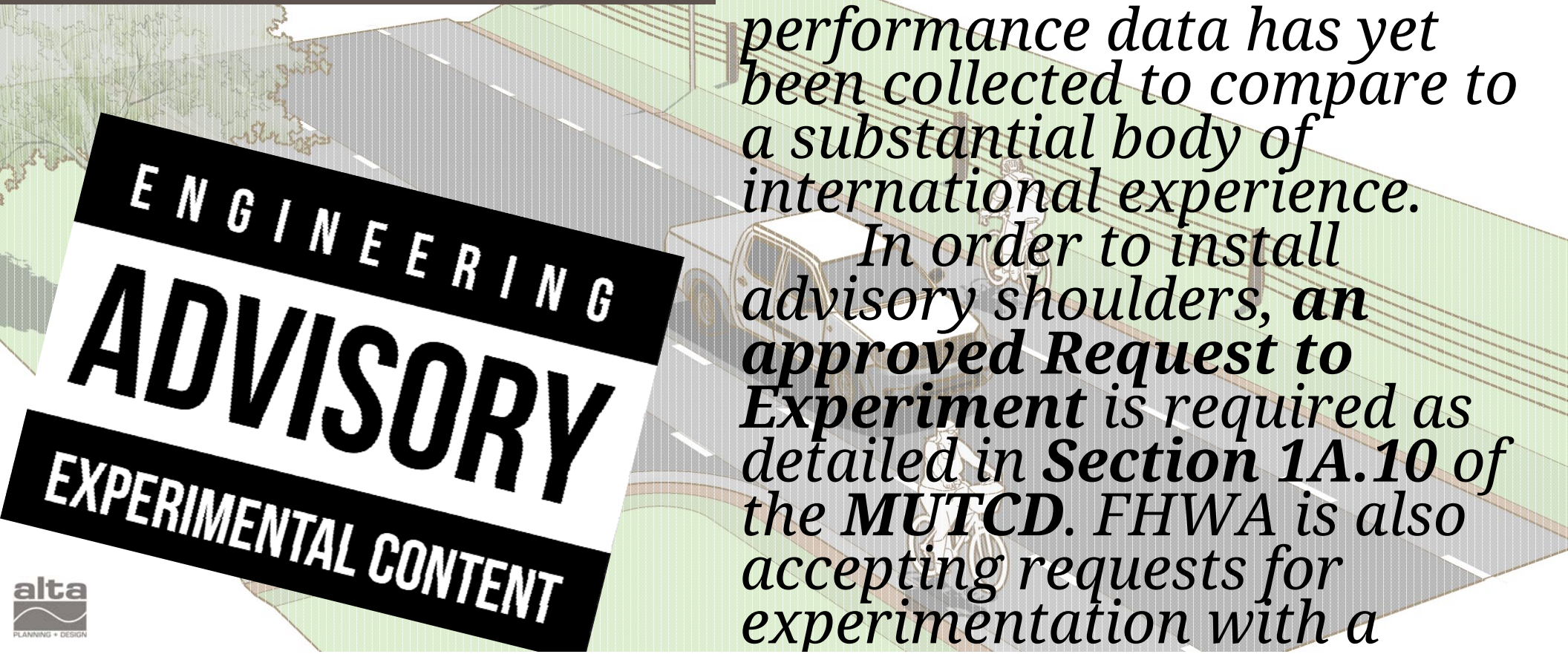
Advisory Shoulder



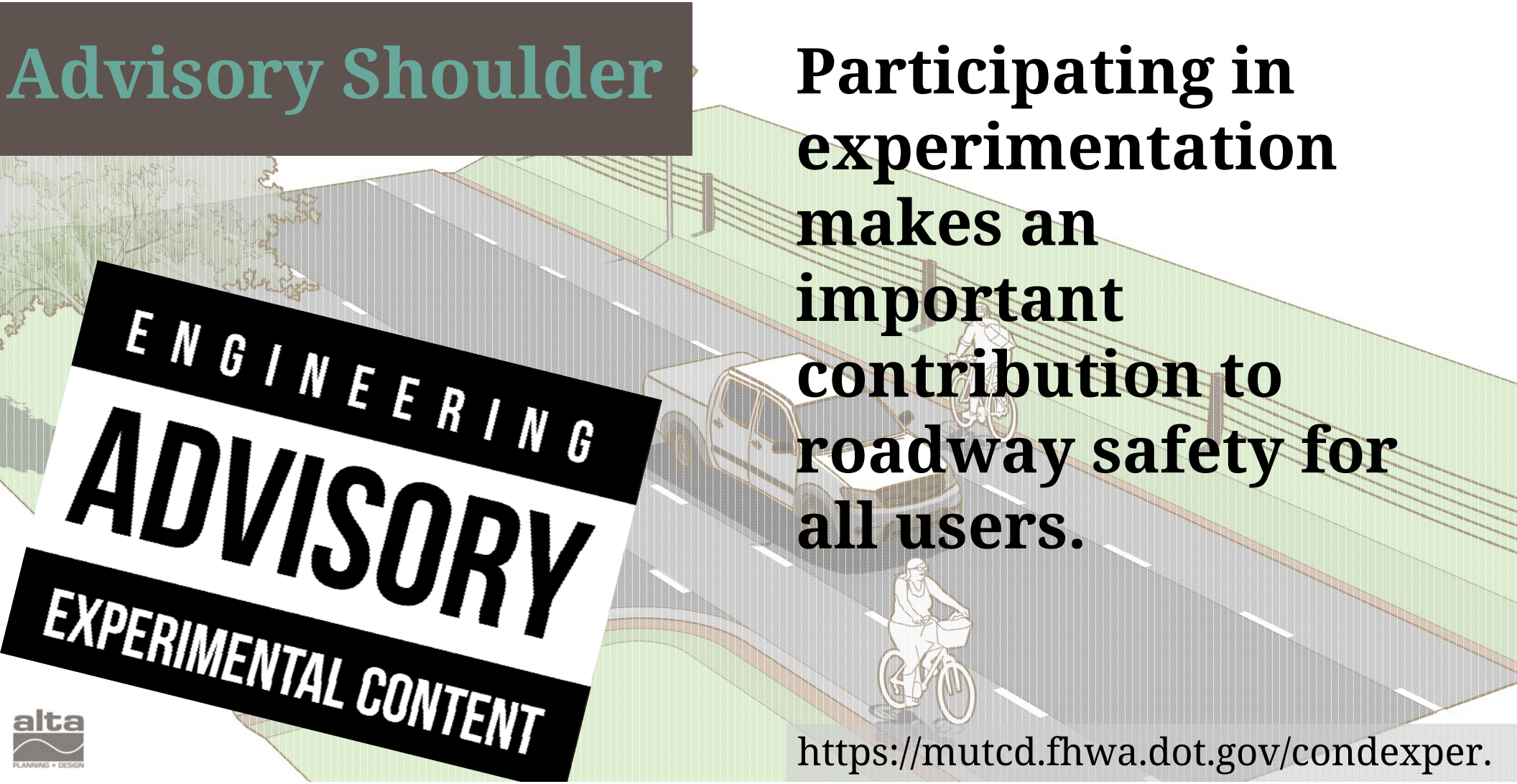
Advisory Shoulder



Note: Advisory shoulders are a new treatment type in the United States and no performance data has yet been collected to compare to a substantial body of international experience.

In order to install advisory shoulders, ***an approved Request to Experiment*** *is required as detailed in* ***Section 1A.10*** *of the* ***MUTCD****. FHWA is also accepting requests for experimentation with a*

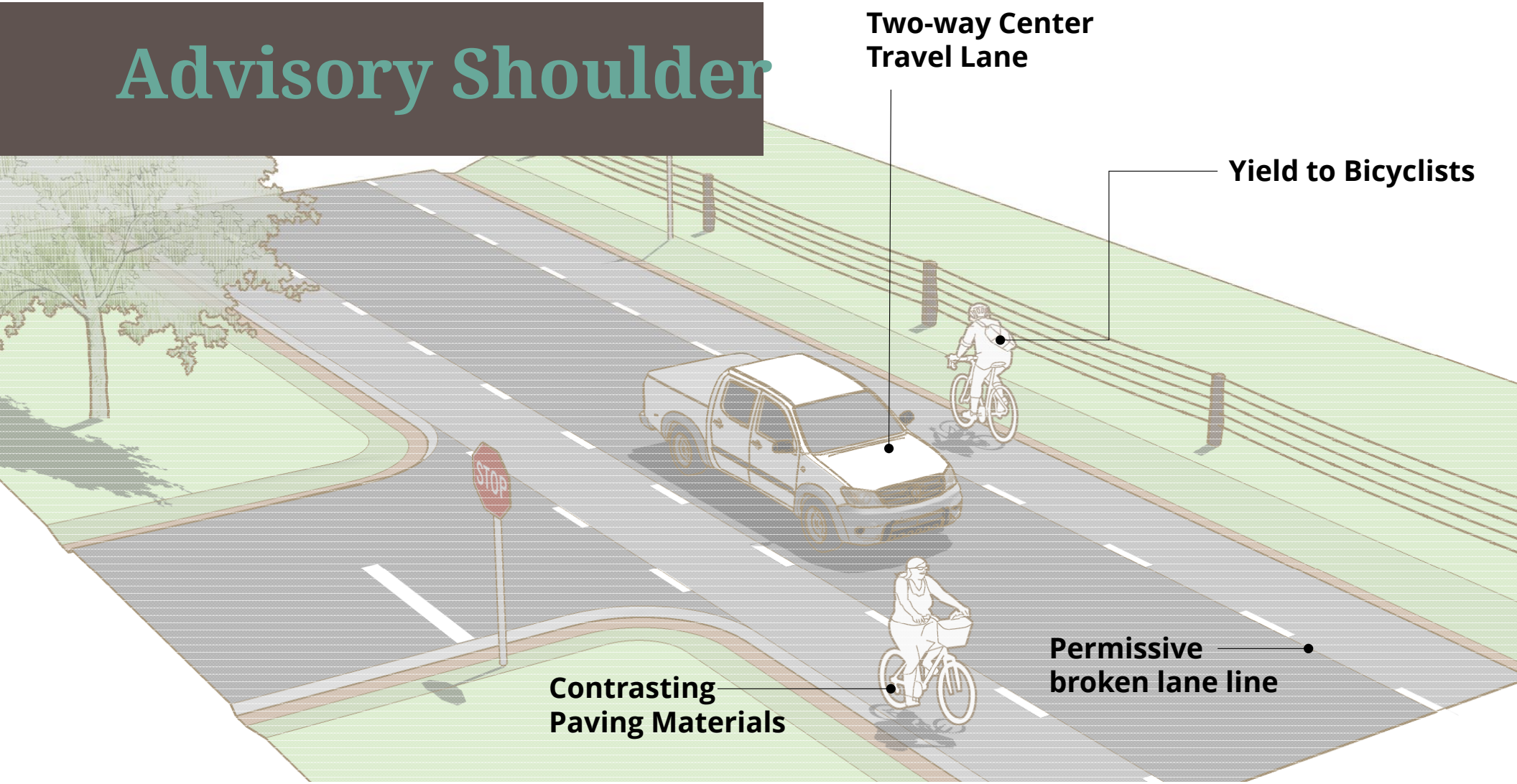
Advisory Shoulder



Participating in experimentation makes an important contribution to roadway safety for all users.

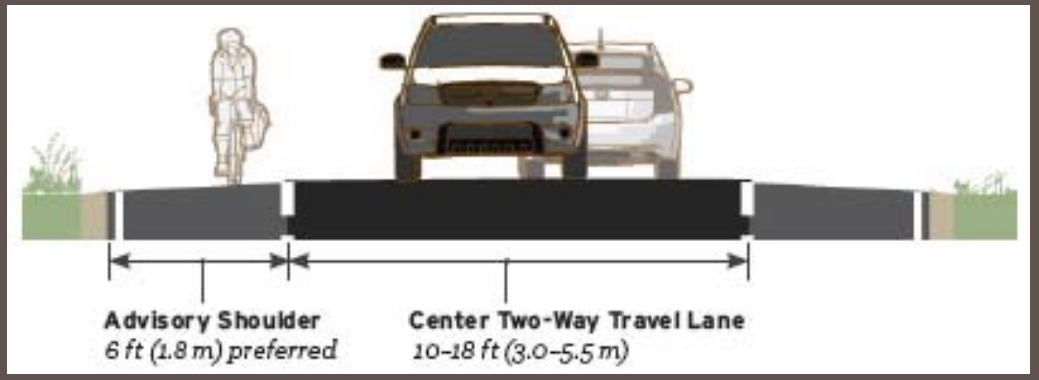
https://mutcd.fhwa.dot.gov/condexper.

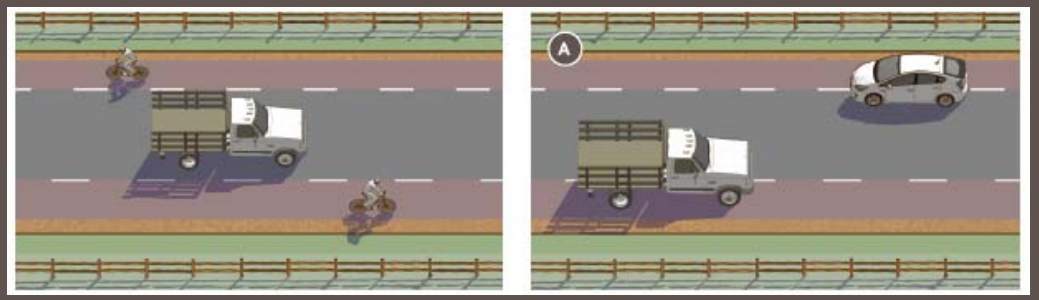
Advisory Shoulder



Advisory Shoulder

- *Establishes a shoulder on an otherwise too narrow road*
- *Delineated by pavement markings*
- *Colored pavement optional and mostly not done in US*
- *Driver must exit shoulder to overtake bicyclists*
- *Driver must enter shoulder to yield to oncoming traffic*





Not a standard MUTCD sign

@Western Transportation Institute

Hanover, NH

Population: 11,000

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Hanover, NH
Population: 11,000

Bloomington, IN

Population 82,575

Edina, MN

Population: 49,300

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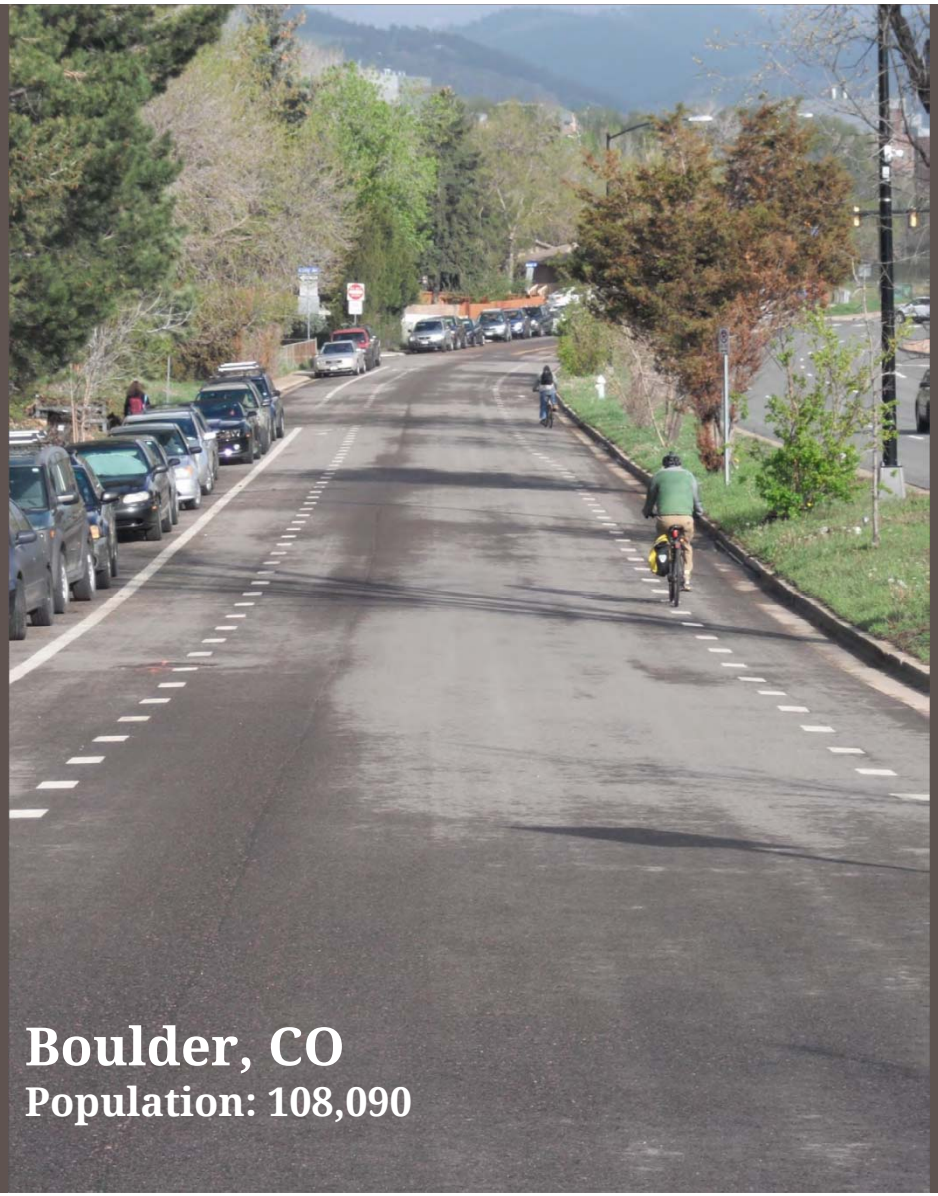

Boulder, CO

Population: 108,090

Advisory Shoulder

02 CASE STUDIES

To support this white paper, authors conducted a survey on 12 Advisory Bike Lane installations. Those installations are:

- Alexandria, VA
  Potomac Greens Drive
- Bloomington, IN
  East 7th Street
- Boulder, CO
  Harvard Lane
- Burlington, VT
  Flynn Avenue
- Cambridge, MA
  Irving and Scott Streets
- Cambridge, MA
  Lakeview Avenue
- Edina, MN
  West 54th Street
- Edina, MN
  Wooddale Avenue
- Hanover, NH
  Valley Road
- Minneapolis, MN
  East 14th Street
- Ottawa, ON
  Somerset Street East
- Sandpoint, ID
  Oak and Main Streets

Authors contacted a representative of the local agency responsible for each facility and interviewed staff about the installation. Areas of interest were public outreach, geometric design, and evaluation of the facility.

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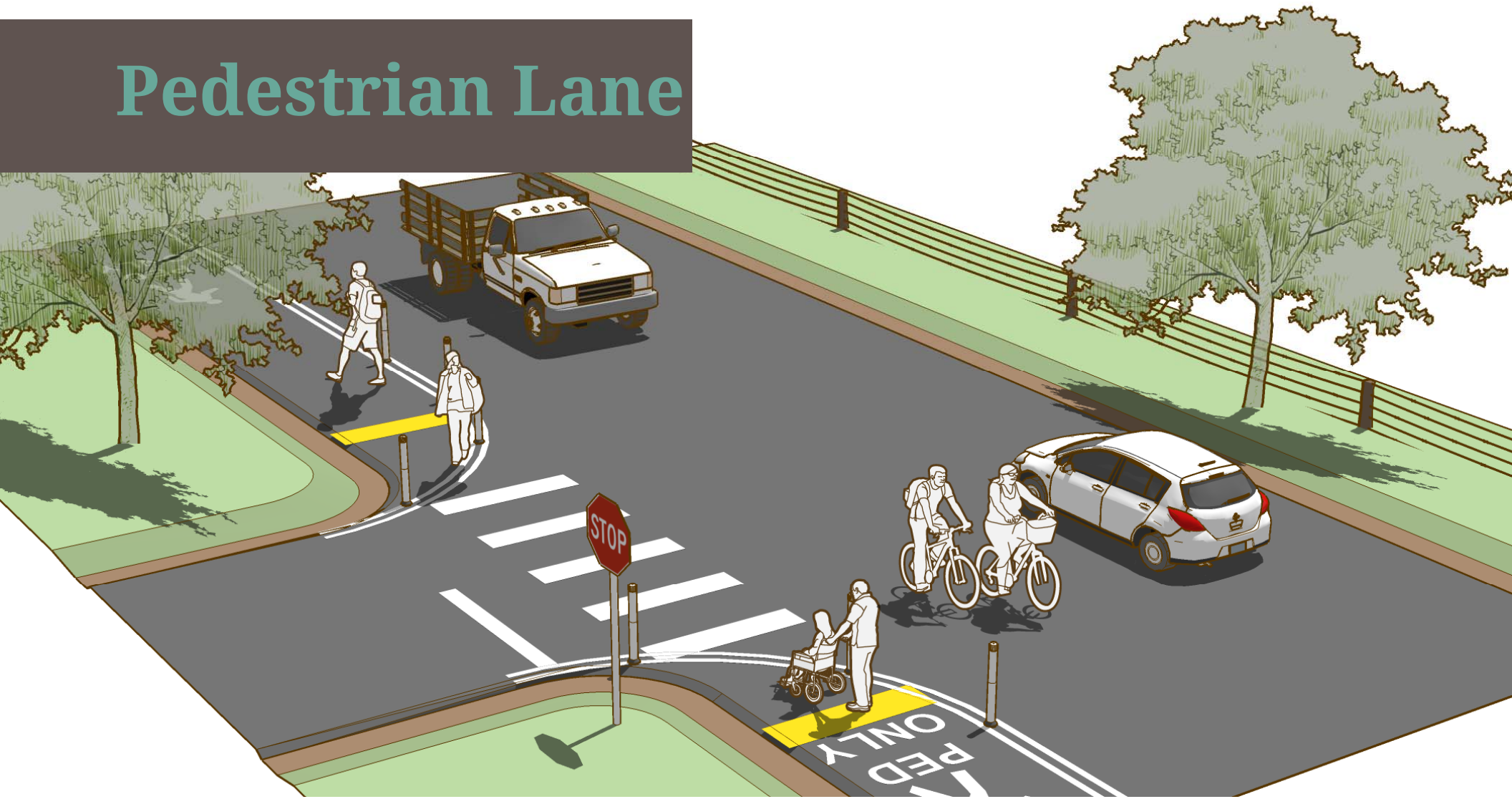
Advisory Bike Lanes in North America

LESSONS LEARNED

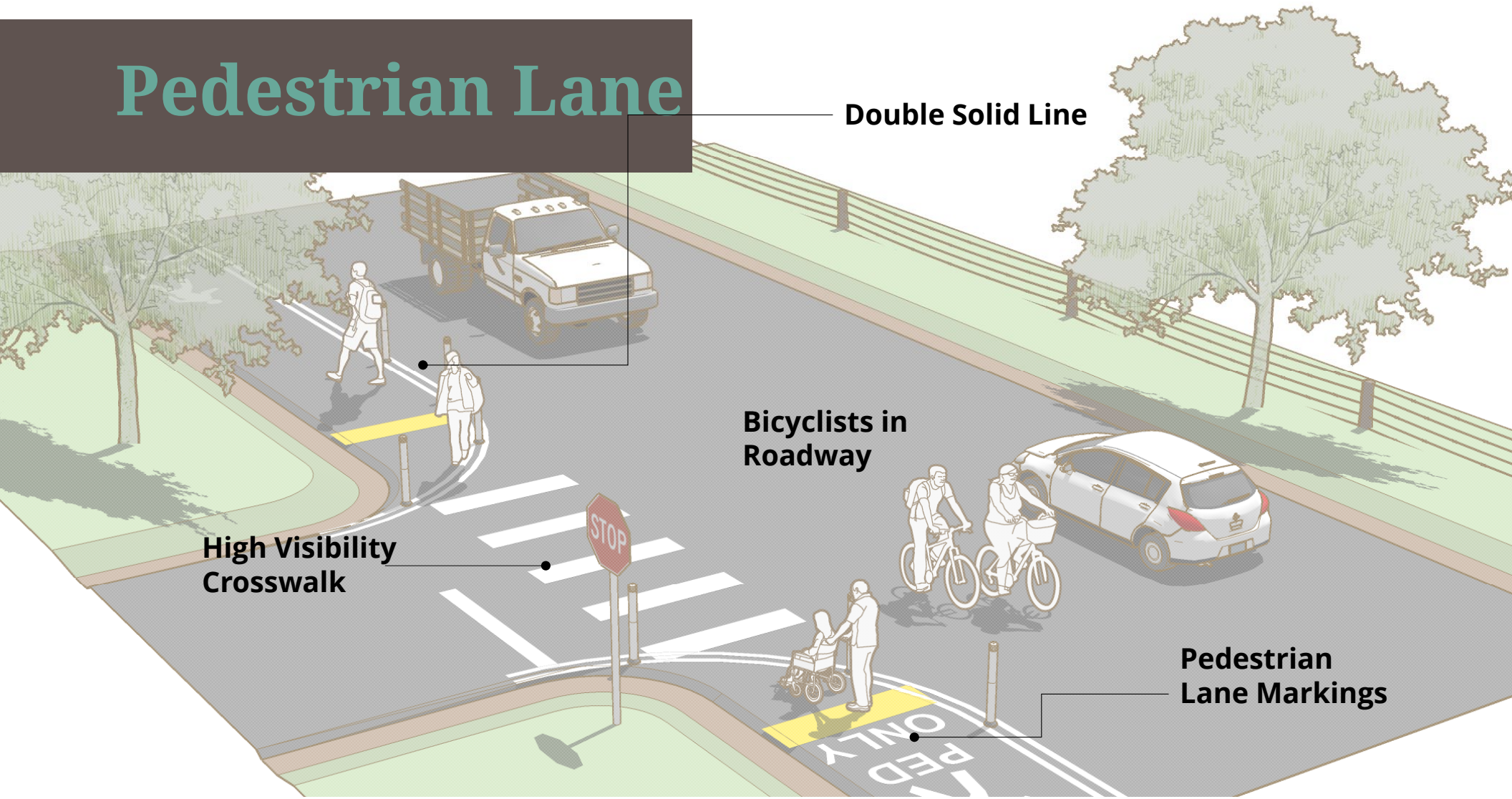
July 2017

PREPARED BY:
Alta Planning + Design
711 SE Grand Avenue
Portland, OR 97214

Pedestrian Lane



Pedestrian Lane



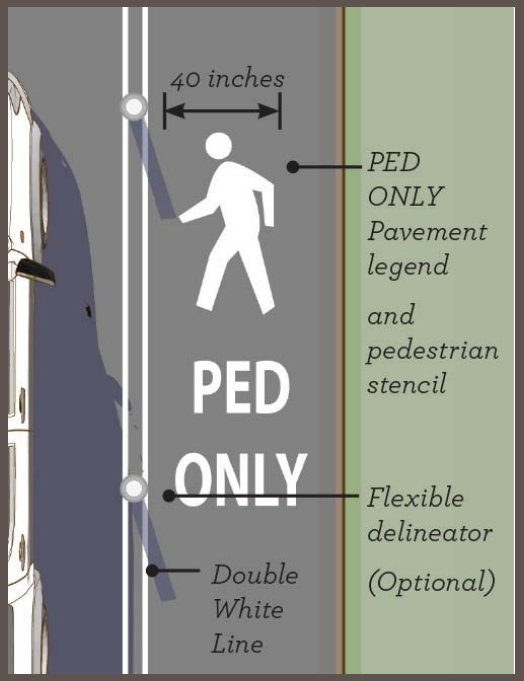
Pedestrian Lane

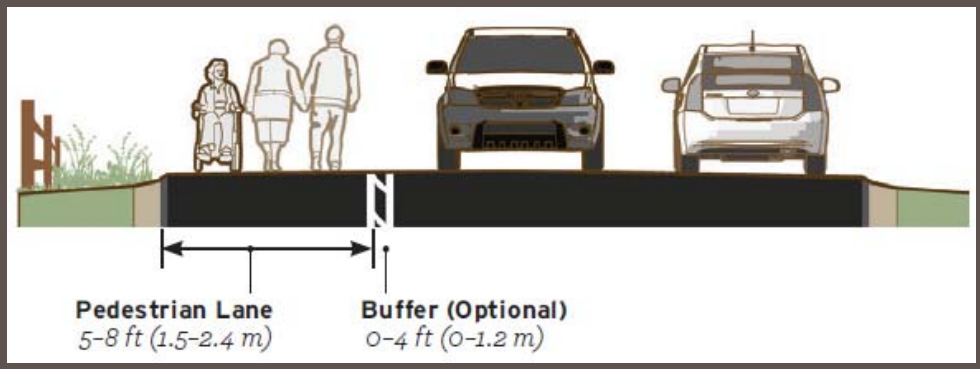
As part of the planning process, agencies should explore issues and the potential challenges a pedestrian lane may face, including:

- Detectability by people with vision disabilities
- Bicyclists may want to use facility
- Accessible cross-slope requirements
- Maintenance strategies, such as sweeping and snow removal

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.*

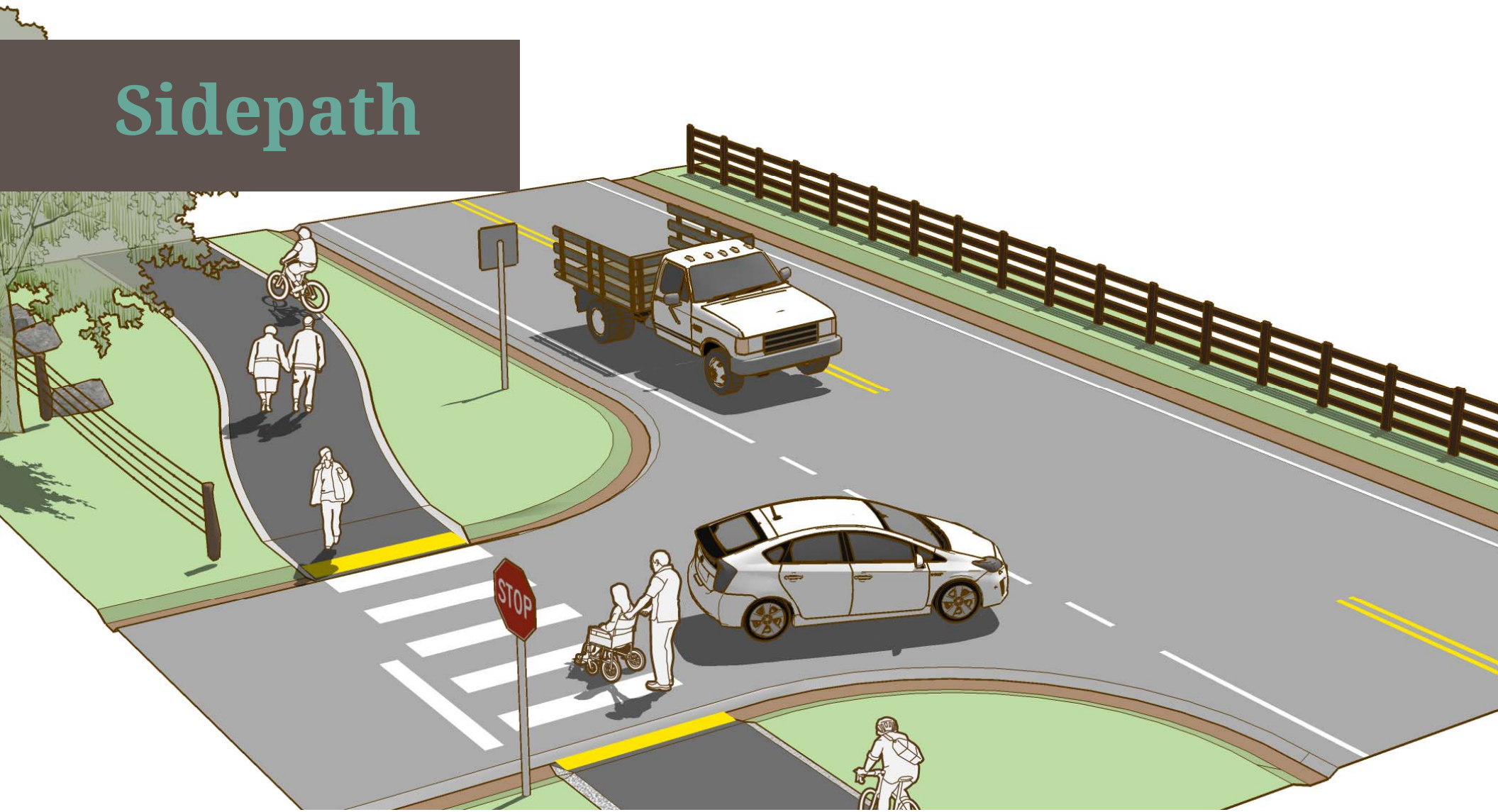




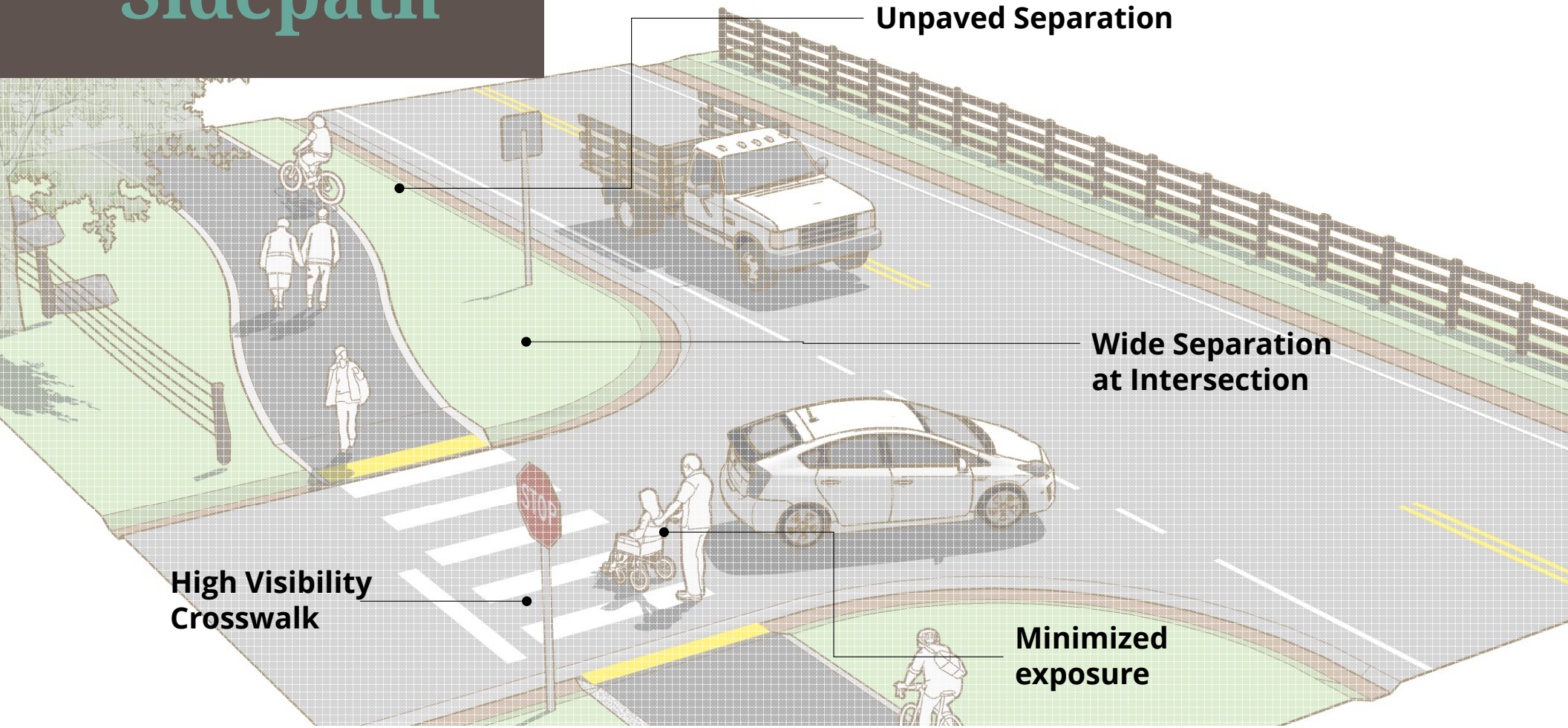
Detroit, OR
Population: 200

Teton Village, WY
Population: 330

Sidepath

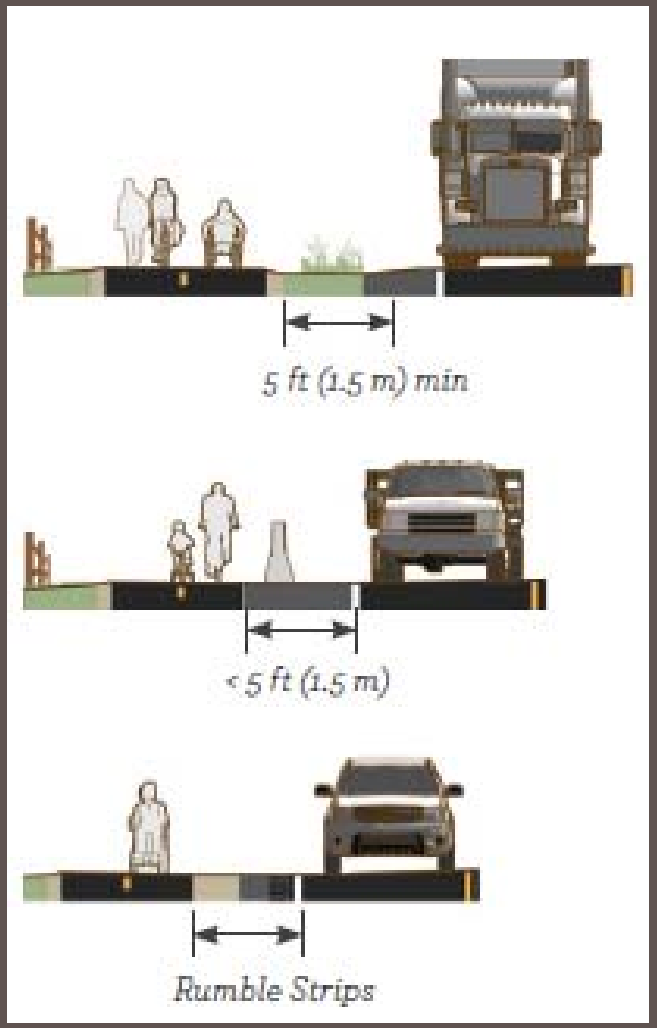


Sidepath

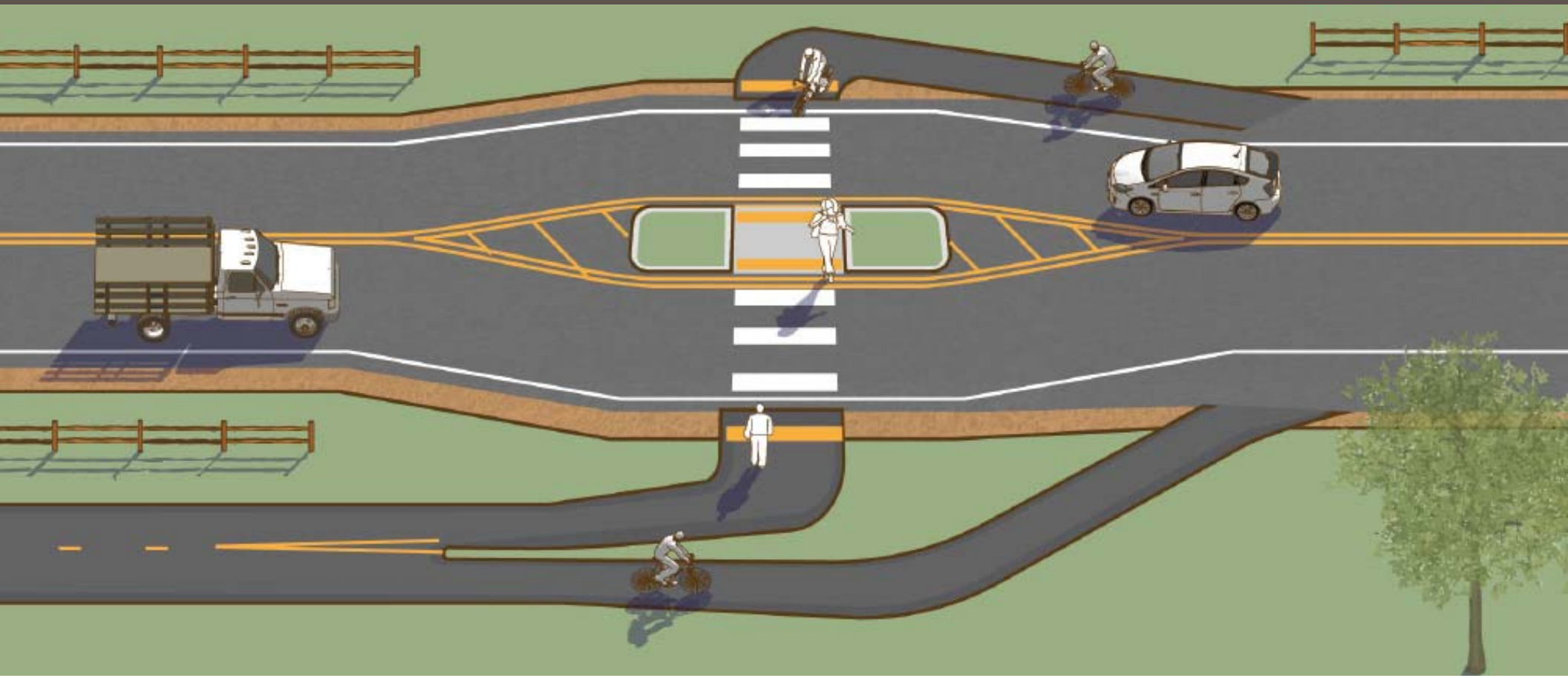

Unpaved Separation
Wide Separation
at Intersection
High Visibility
Crosswalk
Minimized
exposure

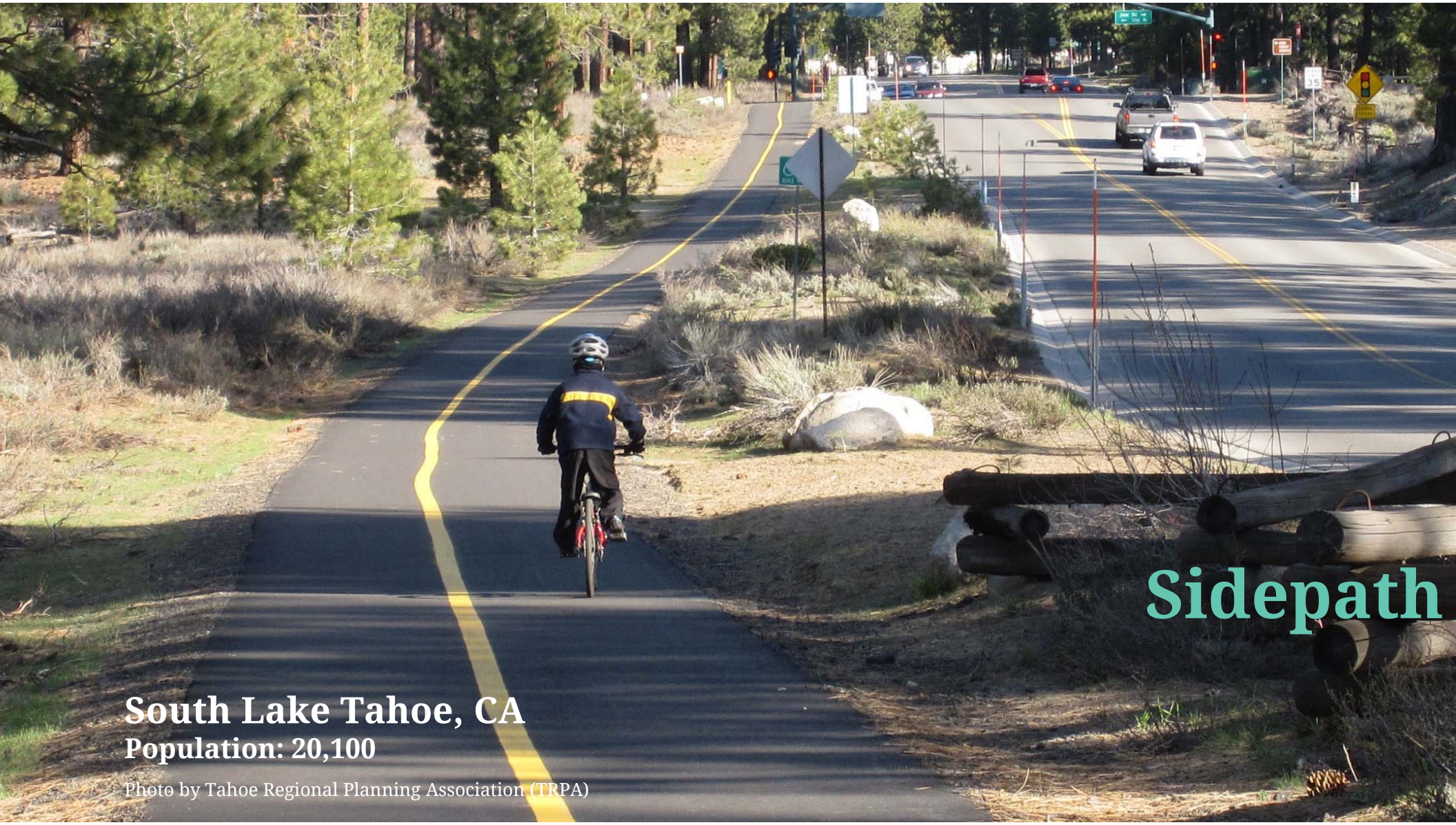
Sidepath

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.



Sidepath





Sidepath

South Lake Tahoe, CA

Population: 20,100

Photo by Tahoe Regional Planning Association (TRPA)

Guide Availability

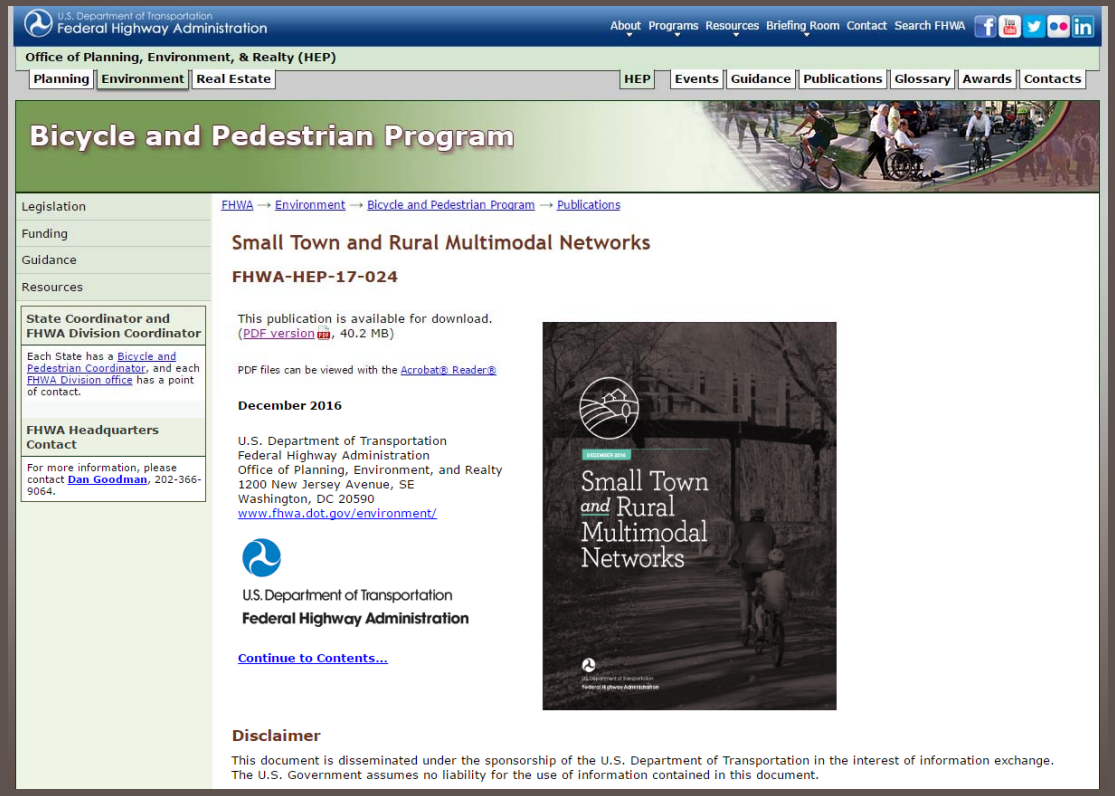
For printing and online reference

FHWA Publication Distribution

PDF Download and web access:

Publication No: FHWA-HEP-17-024

www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/



Thank You

Sam Corbett

samcorbett@altaplanning.com

213-257-8600