Bicycle and Pedestrian Funding, Design, and Environmental Review: Addressing Common Misconceptions

August 20, 2015

Introduction

The U.S. Department of Transportation (DOT) has been working to address nonmotorized safety issues nationwide and help communities create safer, better-connected bicycling and walking networks as part of the Department's Safer People, Safer Streets Initiative.

Since launching the Safer People, Safer Streets Initiative in 2014, DOT has engaged safety experts, existing and new stakeholders, local officials, and the public on a range of targeted strategies to encourage safety for bicyclists and pedestrians on and around our streets, including bus stops, transit stations, and other multimodal connections. Through these discussions, a number of common misconceptions have been raised about the use of Federal funding, street design, and the Environmental Review process that can cause confusion and result in project delay.

The information below addresses these common misconceptions and distinguishes between Federal standards and State and local practice. Where possible, links identify resources that provide more detail on the topic. This document focuses on three policy areas: Funding, Design, and Environmental Review.

Funding Misconceptions

1. The Transportation Alternatives Program (TAP) is the only Federal funding source for pedestrian and bicycle projects.

This is false. While TAP is a popular source of funding for bicycle and pedestrian infrastructure, pedestrian and bicycle projects are eligible for many programs through the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). At FHWA, pedestrian and bicycle projects are eligible for funding through the Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Surface Transportation Program (STP), Highway Safety Improvement Program (HSIP), National Highway Performance Program (NHPP), Federal Lands and Tribal Transportation Programs (FLTTP), and TAP. The FTA funding may also be available through Capital Funds and Associated Transit Improvement.

Each of these programs has different requirements, so to be eligible, the pedestrian and bicycle project must meet the program's requirements in order to receive funding. For example, transit funds may be used to improve bike lanes and sidewalks as long as they provide direct access to transit; CMAQ funds must be used for projects that benefit air quality; HSIP projects must be consistent with the State Strategic Highway Safety Plan and address a highway safety problem; NHPP-funded projects must benefit National Highway System (NHS) corridors; and FLTTP funds could be used for bicycle and pedestrian accommodations that provide access to or within Federal or tribal lands. Often bicycle and pedestrian elements are included in much larger roadway or station-area projects that are funded through each of these programs. For example,

pedestrian and bicycle facilities may be included on rehabilitated, reconstructed, or new bridge structures to improve the network. The FHWA division offices can assist in determining options for using multiple funding sources to fund one project.

Funding is also available for non-infrastructure projects. For instance, the National Highway Traffic Safety Administration (NHTSA) provides funding for behavioral safety aspects, education, and enforcement, in coordination with the State's highway safety office.

More information:

Bicycle and Pedestrian Funding Opportunities
www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.cfm

Federal-Aid Highway Program Funding for Pedestrian and Bicycle Facilities and Programs
http://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/bipedfund.cfm

FTA Bicycles and Transit Information
http://www.fta.dot.gov/13747_14399.html

Final Policy Statement on Eligibility of Pedestrian and Bicycle Improvements under Federal Transit Law
https://www.federalregister.gov/articles/2011/08/19/2011-21273/final-policy-statement-on-the-eligibility-of-pedestrian-and-bicycle-improvements-under-federal

2. Federal transportation funds cannot be used to enhance the local roadway network.

This is false. The FHWA guidelines allow NHS capacity and safety needs to be addressed through a mix of on-system and parallel system network streets. A portion of the local network is part of the Federal-aid highway system. All other roads that have a functional classification higher than local road or rural minor collector are eligible for Federal-aid funding through STP. Projects on local roads and rural minor collectors may be eligible in some cases. Furthermore, STP, TAP, and HSIP funds may be used for bicycle and pedestrian projects along any public road or trail, without any location restriction.

More information:

STP Eligibility
http://www.fhwa.dot.gov/map21/factsheets/stp.cfm

Functional Classification
http://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/

STP Guidance
http://www.fhwa.dot.gov/map21/guidance/guidestprev.cfm, see Eligibility.

TAP Guidance
http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm, see Eligibility.

HSIP Guidance
http://www.fhwa.dot.gov/map21/guidance/guidehsip.cfm

3. Separated bike lanes cannot be built with Federal funds.

This is false. Federal funds can be used to plan and build separated bike lanes, which can include cycle tracks and protected bike lanes. The FHWA recently published a *Separated Bike Lane Planning and Design Guide*, which includes planning considerations and design options for separated bike lanes. In addition, separated bike lanes are included in the Bicycle and Pedestrian Funding Opportunities: US Department of Transportation, Federal Transit, and Federal Highway Table.

More information:

FHWA *Separated Bike Lane Planning and Design Guide*
http://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/separated_bikelane_pdg/page00.cfm

4. Federal funds can't be used for road diets.

This is false. Federal funds may be used for road diets, which are generally described as removing vehicle lanes from a roadway and reallocating the extra space for other uses or traveling modes, such as parking, sidewalks, bicycle lanes, transit use, turn lanes, medians, or pedestrian refuge islands. The FHWA supports consideration of road diets or rightsizing when applied at the proper location and has created a webpage to promote the use of this technique. Road diets can offer significant safety benefits to a community (20-60% reduction in crashes is common) and are one of FHWA's Proven Safety Countermeasures being promoted through the FHWA Every Day Counts 3 Initiative. Additionally, in many applications, they are part of city and regionally approved pedestrian and bicycle master plans, and community comprehensive master plans. Localities across the nation are using this low-cost safety countermeasure to improve safety, operations, and livability in their communities.

More information:

FHWA Office of Safety Road Diet
http://safety.fhwa.dot.gov/road_diets

5. Nonmotorized projects cannot compete effectively for CMAQ funding.

This is false. States have funded more than $1.5 billion in bicycle and pedestrian accommodations with CMAQ Program funds since 1993. The CMAQ Program is intended to be a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former

nonattainment areas that are now in compliance (maintenance areas). Funds may be used for transportation projects likely to contribute to the attainment or maintenance of a national ambient air quality standard, with a high level of effectiveness in reducing air pollution. The CMAQ funding is apportioned to the States to support projects that meet specific eligibility criteria. Some locations give preference to CMAQ eligible quality of life projects, such as nonmotorized transportation projects, as part of their CMAQ funding criteria. See for example the Merced County Association of Governments' Goals and Procedures for Programming CMAQ Funds: http://www.mcagov.org/DocumentCenter/View/188.

More information:

FHWA CMAQ Program
http://www.fhwa.dot.gov/environment/air_quality/cmaq/

Design Misconceptions

6. The only design standard that can be used on Federal-aid highway projects is the AASHTO *A Policy on Geometric Design of Highways and Streets* (Green Book).

This is false. The FHWA adopted the American Association of State Highway and Transportation Officials (AASHTO) Green Book as the design standard for projects on the NHS, other than projects on the Interstate highway system, regardless of funding source (23 CFR 625). States may adopt their own standards for non-NHS projects (23 CFR 625.3(a)(2)). The Green Book provides flexibility in design. When a Green Book standard applies but an element of the design is outside the Green Book parameters, a design exception may be considered in accordance with 23 CFR 625.3(f).

Part 9 of the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD) is dedicated to traffic control on bicycle facilities. Compliance with the MUTCD on facilities open to public travel is required regardless of funding source, in accordance with 23 CFR 655. In addition to the flexibility the MUTCD provides through Guidance and Option provisions, the MUTCD also contains a mechanism for experimenting with novel traffic control devices (Section 1A.10). Note that some of the traffic control treatments shown in the external resources referenced herein might still be subject to the experimentation process under the MUTCD.

The FHWA's 2013 Bicycle and Pedestrian Design Flexibility Memo supports a flexible approach to the planning and design of pedestrian and bicycle facilities. This memo indicates that FHWA supports the use of additional resources that build off the flexibilities provided in the AASHTO *Guide for the Planning, Design, and Operation of Pedestrian Facilities* and the *Guide for the Development of Bicycle Facilities*, as well as the policy based *Green Book*. These resources include the National Association of City Transportation Officials' *Urban Bikeway Design Guide* and the Institute of Transportation Engineers' *Designing Walkable Urban Thoroughfares*. FHWA also recently published the *Separated Bike Lane Planning and Design Guide* that includes planning considerations and design options for separated bike lanes.

More information:

Guidance on NHS Design Standards and Design Exceptions
http://www.fhwa.dot.gov/design/standards/qa.cfm

MUTCD Experimentation Process
http://mutcd.fhwa.dot.gov/condexper.htm

FHWA Design Flexibility Memorandum
http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design_guidance/design_flexibility.cfm

7. Lane widths cannot drop below 11' on the NHS and 9' when Federal funds are used on local roads.

This is false. There is no minimum lane width requirement to be eligible for Federal funding. As stated in the answer to Question 6, States may adopt their own standards for non-NHS roadways. The NHS includes major arterials as well as other roads important to the nation's economy, defense, and mobility. As such, the Green Book generally requires 11' or 12' lanes on these roads. The Green Book allows for lesser lane widths on low-speed facilities and low-volume roads in rural and residential areas; situations in which research shows that narrower lanes should not negatively impact safety if appropriately implemented based on the context. There is no outright prohibition against using lane widths less than those stated in the Green Book, if a design exception is justified and approved in accordance with FHWA regulations and policy. For more information on design standards and design exceptions, please visit http://www.fhwa.dot.gov/design/standards/qa.cfm.

In appropriate contexts, narrower lanes, combined with other features associated with them, can be marginally safer than wider lanes. The FHWA supports the use of sound engineering judgment in design. The FHWA frames this discussion using the terms nominal safety versus substantive safety. Nominal safety means a design meets the technical standards; substantive safety means that a design will achieve low crash rates relative to expectations.

To assist engineers in creating roads that are substantively safe instead of simply meeting standards, FHWA offers several resources:

a. The Highway Safety Manual http://safety.fhwa.dot.gov/hsm/
b. The Interactive Highway Safety Design Model http://www.fhwa.dot.gov/research/tfhrc/projects/safety/comprehensive/ihsdm/
c. Safety Analyst http://www.safetyanalyst.org/
d. The Crash Modifications Factor Clearinghouse http://www.cmfclearinghouse.org/

8. Curb extensions, trees, and roundabouts cannot be used on the NHS.

This is false. There is no prohibition on incorporating these features on NHS projects.

Curb extensions, also known as bulbouts or neckdowns, can have significant benefits for pedestrian safety. Curb extensions are explicitly supported by FHWA because they enhance the

safety of pedestrians, reduce the distance needed to cross the street, and make pedestrians more visible to motorists, particularly when there are parked cars in the vicinity. The related use of medians and crossing islands are FHWA Proven Safety Countermeasures.

The suggested AASHTO clear zone distances will vary based on a number of factors such as speed, traffic volume, roadside grading, and horizontal curvature. On higher speed, higher volume roadways, certain roadside features might need to be located farther from the roadway.

According to FHWA's *Roundabouts: An Informational Guide*, roundabouts can be considered for a variety of reasons from community enhancement and traffic calming to safety improvements and operational benefits. In fact, roundabouts are one of FHWA's Proven Safety Countermeasures.

More information:

FHWA Proven Safety Countermeasures
http://safety.fhwa.dot.gov/provencountermeasures.

Every Day Counts 2012 Initiatives - Intersection and Interchange Geometrics (FHWA included roundabouts as one of the innovations during the initiative)
http://www.fhwa.dot.gov/everydaycounts/edctwo/2012/geometrics.cfm

9. Speed limits must be set using the 85th percentile methodology.

This is false. The MUTCD Section 2B.13 contains the following mandatory (Standard) statement: "Speed zones (other than statutory speed limits) shall only be established on the basis of an engineering study that has been performed in accordance with traffic engineering practices." According to the 2012 FHWA Document *Methods and Practices for Setting Speed Limits*, there are basic ways of setting speed limits. Use of the 85th percentile methodology is just one part of what FHWA calls the Engineering Approach. This is described as "A two-step process where a base speed limit is set according to the 85th percentile speed, the design speed for the road, or other criterion. This base speed limit is adjusted according to traffic and infrastructure conditions such as pedestrian use, median presence, etc." The 2012 document goes on to say that the engineering approach requires the use of judgment. This is different than simply setting a speed limit based on the measured 85th percentile.

The FHWA developed a model called USLIMITS2, which is a web-based tool using an expert system with a fact-based set of decision rules to determine an appropriate speed limit for all roadway users. For roadway segments that experience high pedestrian and bicyclist activities, USLIMITS2 recommends speed limits close to 50th percentile instead of 85th percentile speed. For more information, visit http://safety.fhwa.dot.gov/uslimits/.

The other three approaches to setting appropriate speed limits are called: Expert system approach; optimization; and injury minimization or safe system approach. To learn about these, visit
http://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwasa12004/fhwasa12004.pdf.

Environmental Review Misconception

10. Bicycle and pedestrian projects must be within the existing Right of Way (ROW) to be eligible for a Categorical Exclusion.

This is false. As with all roadway projects, FHWA regulations do not require bicycle or pedestrian facilities to be within the existing ROW to be eligible for a Categorical Exclusion. See 23 CFR 771.117(c).

The environmental review process for the National Environmental Policy Act (NEPA) considers environmental impacts of a proposed project, and does not mandate the siting of a project either within or outside of existing rights-of-way. Often an existing highway right-of-way has been disturbed to a point where it may be unlikely that a bicycle or pedestrian project would result in important impacts. This may or may not be true for proposing a project that includes locations outside of existing rights-of-way. If significant impacts result from a project, whether situated entirely within or including some areas outside existing rights-of-way, a categorical exclusion may not be appropriate, and an Environmental Assessment (EA) or Environmental Impact Statement (EIS) would need to be prepared instead.