Complete Street Policies

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National Bike and Pedestrian Fatalities

Pedestrian and Cyclists as Percent of Total Traffic Fatalities

Pedestrian % of Total Fatalities

Bicyclist % of Total Fatalities

% of Fatalities Decreased Since 2003

Source: National Highway Traffic Safety Administration, USDOT
16% increase in the number of bicyclists killed in motor vehicle crashes between 2010 and 2012.

- 621 in 2010
- 680 in 2011
- 722 in 2012
Actually, biking has been getting dramatically safer as Americans ride more.

October 28, 2014
OVERALL GROWTH OF BIKE COMMUTING
(2000-2011)

NON-BICYCLE FRIENDLY COMMUNITIES: 32%
ALL OF UNITED STATES: 47%
BICYCLE FRIENDLY COMMUNITIES: 80%

- Green line: number of bike trips
- Red line: risk of taking a bike trip

Sources: FARS and NHTS/NPTS
11.4% of all trips are taken by bicycle or on foot.

14.9% of roadway fatalities are pedestrians & bicyclists.

but only 2.1% of federal transportation funding goes to bicycling and walking projects.

Iowa
Rural vs. Urban Bicycle Crashes

- 0.5% mode share
- 1.3% of all crash fatalities (Average 5 fatalities per year)
- Average 417 bicycle crashes per year
Iowa
Rural vs. Urban Pedestrian Crashes

- 3.8% mode share
- 5.4% of all crash fatalities (Average 22 fatalities per year)
- Average 467 pedestrian crashes per year
“Livability means being able to take your kids to school, go to work, see a doctor, drop by the grocery or post office, go out to dinner and a movie, and play with your kids at the park—all without having to get in your car.”

Ray LaHood, Former Secretary of Transportation
“When you think about it, the problems with our transportation system aren’t just mobility problems. They’re economic problems. Inequality problems. Civil rights problems.”

Anthony Foxx, Secretary of Transportation
149,916 Recreational Riders
- Economic impact
  $364,864,202
- Health savings
  $73,942,511

24,921 Bicycle Commuters
- Economic impact
  $51,965,317
- Health savings
  $13,266,020
Transportation Bills

1956 - 1981
- Federal Aid Highway Act
- Interstate Highway System
- Forests and national park trails

1982 - 1990
- STAA
- Transit

1991 - 1997
- ISTEA
- TE
- Rec Trails

1998 - 2004
- TEA-21
  - TE
  - Rec Trails
  - SRTS

2005 - 2011
- SAFETEA-LU
  - Increased Funding
  - TE
  - Rec Trails
  - SRTS

2012 - 2020
- MAP-21
  - TA
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.
Recommended Actions

- Considering walking and bicycling as equals with other transportation modes
- Ensuring that there are transportation choices for people of all ages and abilities, especially children
- Going beyond minimum design standards
- Integrating bicycle and pedestrian accommodation on new, rehabilitated, and limited-access bridges
- Collecting data on walking and biking trips
- Setting mode share targets for walking and bicycling and tracking them over time
- Removing snow from sidewalks and shared-use paths
- Improving nonmotorized facilities during maintenance projects
Bicycle and Pedestrian Legislation

Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use are not permitted.

Sec. 217 (g)(1)
National Intelligent Transportation System

- accommodation of the needs of all users of surface transportation systems, including operators of commercial motor vehicles, passenger motor vehicles, motorcycles, bicycles, and pedestrians (including individuals with disabilities)

Sec 514 (a)(4)
We can’t just tell pedestrians and bicyclists, “Follow the rules of the road,” without recognizing that... in some places, there’s no safe place for them to be.
Safe Streets Act

Requires all federally-funded transportation projects to accommodate the safety and convenience of all users in accordance with certain complete streets principles.

(H.R. 2468 / S.2004)
Complete Streets Principles

Accommodate the safety and convenience of all users of a transportation system in all phases of planning and development:
Exceptions

Specified users are prohibited

Cost is “excessively disproportionate” to the need

We think only CARS will use it.

AND - all such exemptions are properly approved.
Exceptions

“I’m here about the details.”

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Exception #1

• “Specified Users Prohibited”
  – Interstate Highway System
  – Minimum speed limit and no frontage roads
Exception #2

• “Excessively Disproportionate”
  – Exceed 20% of the cost of the larger project
  • BUT, high bike and pedestrian volumes may warrant larger %
  – If it exceeds 20%, still have to complete up to 20%
Exception #3

• Demonstrated absence of future needs
  – Current and future land use
  – Current and projected user volumes
  – Population density
  – Crash data

• Time horizon
  – ½ of the operational lifespan of the transportation facility for pedestrian facilities (entire lifespan for bridges)
  – Entire operational lifespan for bicycle facilities
  – Beyond the operational lifespan for planning and ROW acquisition (2 x the operational lifespan)
Before Deciding...

- Consult
  - Local and regional plans
  - Local and regional leaders
  - General public
Technical Committee

• Staffed by Iowa DOT
  – Provide education and advice
  – Make recommendations
    • Restructuring procedures
    • Design guidance
    • Educational opportunities to employees
    • New measures to track success in multi-modal planning and design
  – Submitting annual reports
Advisory Board

• Make recommendations and provide advice to Iowa DOT on restructuring procedures
• Updating design guidance
• Providing educational opportunities to county, municipal, and consulting engineers and planners
• Establishing new measures to track success in multi-modal planning and design
USDOT Responsibilities

• Evaluate compliance by states and MPOs
• Conduct research on complete streets to:
  – Assist in developing compliant plans, projects, procedures, policies, and training
  – Establish benchmarks and technical guidance in implementing polices and principles
WHEN
Not Sure When

- Safe Streets Act
  - On 6/21/2013 was referred to subcommittee in the HR
  - On 2/6/2014 was referred to committee in the Senate
  - If passed, will require compliance within 2 years.
  - Possibly Never
Bicycle Facilities/
Bicycle Accommodations/
Bikeways

- Trails/Sidepaths
- Bike Lanes
- Buffered Bike Lanes
- Shoulder Bikeways
- Cycle Tracks/Protected Bike Lanes
- Shared Lane Markings/Sharrows
- Bicycle Boulevards/ Quiet Streets/ Neighborhood Greenways

JARGON: AN INDUSTRY'S WAY OF MAKING YOU THINK THAT WHAT THEY DO IS REALLY COMPLICATED.
Trail

- 8 - 12’ wide path
- Paved
- ADA compliant
- Follows rivers, creeks, greenways, railroad lines, streets
- Separated from the roadway
- Bicyclists AND Pedestrians
Hiles, Jeffrey A. *Listening to Bike Lanes*. September 1996.
Bicycle Lanes

1. Desired width: 6 feet

2. Wherever possible, minimize parking lane width in favor of increased bike lane width.

3. BIKE LANE MUTCD R3-17

4. 6- to 8-inch solid white line

5. 4 inch solid white line

6. Separation between bike lane striping and parking boundary reduces risk of door zone conflicts.
Bicycle Lanes

- Increases bicyclist comfort and confidence
- Creates separation between bicyclists and automobiles
  - Increases predictability
  - Increases street capacities
- Visually indicates bicyclists’ right to the street.
Conventional Bike Lane
Shoulder Bikeways
Buffered Bike Lanes
Contra Flow Bike Lane
Left Side Bike Lane
Cycle Tracks
Protected Bike Lane

Design Guidance
One-Way Protected Cycle Tracks

At transit stops, consider wrapping the cycle track behind the transit stop zone to reduce conflicts with transit vehicles and passengers.

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- Tubular Markers
- Movable Planters
- Raised Curb
Cycle Tracks

- Bicycle-only facility
- Mixes trail and bike lane aspects
- Separated from traffic by barrier
- Increases ridership
Raised Cycle Tracks
Two-way Cycle Track
Shared Lane Markings

1. Preferred placement on 25 mph streets: center of travel lane
2. Minimum placement: 11 feet
3. Minimum placement: 4 feet
4. Lateral placement is critical to encourage riders to avoid the “door zone.”

The door zone represents an area where cyclists must be especially aware of vehicles that could be presented by the driver side door. Dedicated bicycle facilities can be designed to heighten this awareness. See guidance for Blue Lanes and Cypria tracks for more information.
Shared Lane Markings

- Helps position bicycles on streets
- Notifies motorists to expect bicycle traffic
- Encourages bicyclists to ride in straight line
- Used on streets where bike lanes are preferred, but lack space
- Use on lower volume, lower speed streets
Shared Lane Markings

Mason City, Iowa
Quiet Streets

- Bikes share street with vehicles
- Uses low-traveled streets
- Parallels arterial streets
- Utilizes different levels of traffic calming
- Attracts all ages and confidence levels
SW 14th Quiet Street

- Gray's Lake Park: 0.1 mi., 1 min.
- Meredith Trail: 2.0 mi., 15 min.
- Downtown: 3.0 mi., 20 min.
- MacRae Park via SW 12th St: 3.0 mi., 20 min.
SW 14th Quiet Street
How – Making Room

- Reallocate Roadway Space
  - Reduce lane widths
  - Reduce the number of lanes
  - Add or widen sidewalks
  - Add bicycle facilities

- Make All Road Users Aware
  - Use signage
  - Use pavement markings

- Slow Traffic
  - Use traffic calming
  - Create side friction
Take Aways

• If you build it, they will come
• Safety in numbers
• Your country wants you to
• Complete streets are good for the community
• Engineering techniques evolve

complete streets are for everyone