Association of Metropolitan Planning Organizations

Savannah, GA
October 19, 2017

STEP
Safe Transportation for Every Pedestrian

every day counts
An Innovation Partnership with States

U.S. Department of Transportation
Federal Highway Administration

How many grew up as Free Range Children?

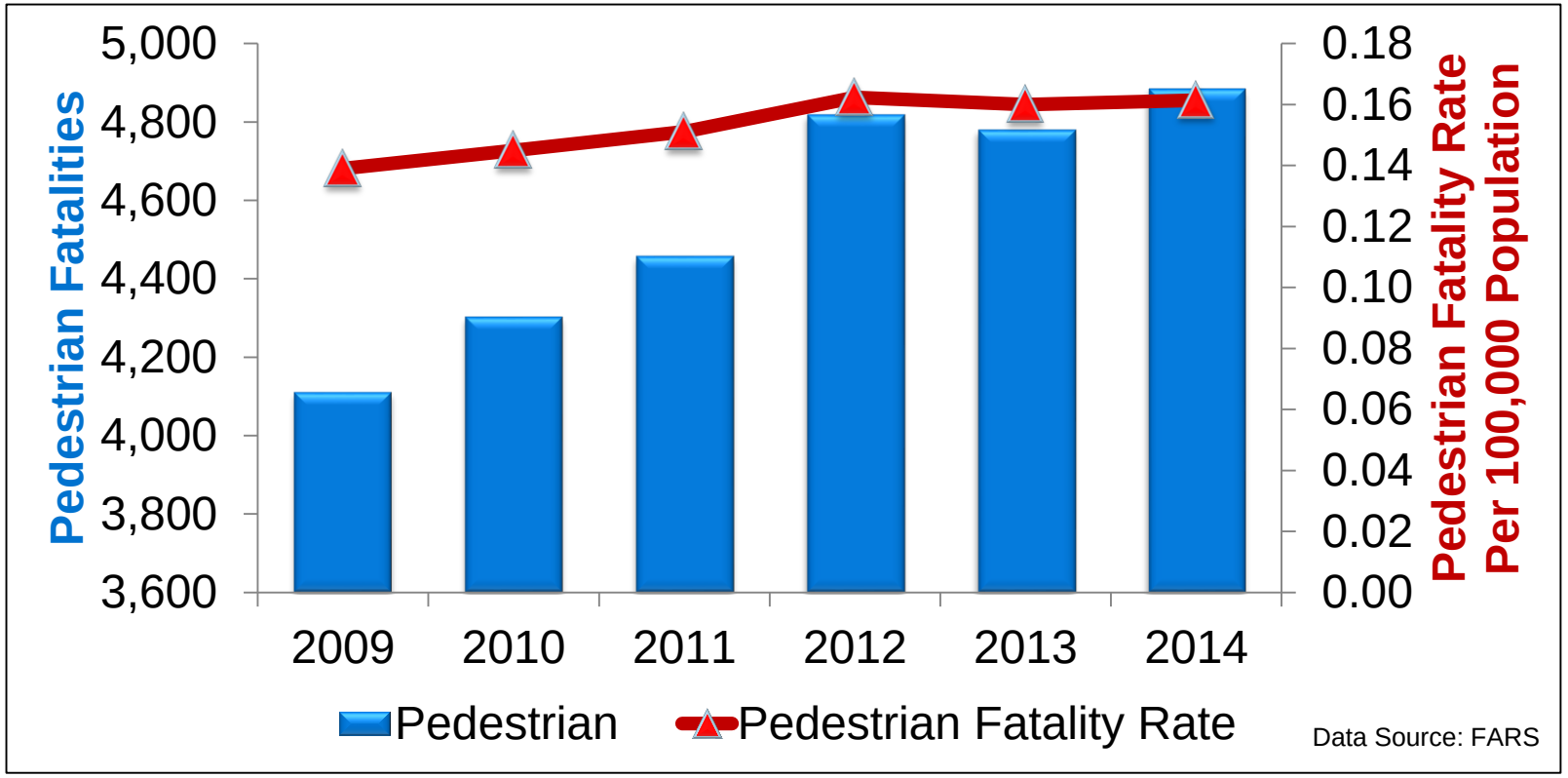
Are your kids Free Range?

MiniCooped


McDonald's
DISCOUNT
TIRE CO.

A more important Question

How many Pedestrians did not make it safely across the roadway in the United States?



Safety Performance Measures

Metropolitan Planning Organization Safety Performance Measures Fact Sheet

Safety Performance Measures

The Safety Performance Management Measures regulation supports the Highway Safety Improvement Program (HSIP) and requires State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) to set HSIP targets for 5 safety performance measures. This document highlights the requirements specific to MPOs and provides a comparison of MPO and State DOT responsibilities.

HSIP Safety Targets Established by MPOs	
1	Number of fatalities
2	Rate of fatalities
3	Number of serious injuries
4	Rate of serious injuries
5	Number of non-motorized fatalities and non-motorized serious injuries

How do MPOs establish HSIP targets?

Coordination is the key for all stakeholders in setting HSIP targets. Stakeholders should work together to share data, review strategies and understand outcomes. MPOs must work with the State DOT. MPOs should also coordinate with the State Highway Safety Office, transit operators, local governments, the FHWA Division Office, National Highway Transportation Safety Administration (NHTSA) Regional Office, law enforcement and emergency medical services agencies, and others. By working together, considering and integrating the plans and programs of various safety stakeholders, MPOs will be better able to understand impacts to safety performance to establish appropriate HSIP targets. Coordination should start with the Strategic Highway Safety Plan (SHSP). More information on the SHSP is available at http://safety.fhwa.dot.gov/hsip/shsp/.

MPOs establish HSIP targets by either:

1. agreeing to plan and program projects so that they contribute toward the accomplishment of the State DOT HSIP target or
2. committing to a quantifiable HSIP target for the metropolitan planning area.

To provide MPOs with flexibility, MPOs may support all the State HSIP targets, establish their own specific numeric HSIP targets for all of the performance measures, or any combination. MPOs may support the State HSIP target for one or more individual performance measures and establish specific numeric targets for the other performance measures.

https://safety.fhwa.dot.gov/hsip/spm/docs/mpo_factsheet.pdf

STEP

Safe Transportation for Every Pedestrian

National Data

- Over 66% of pedestrian fatalities occur at non-intersection locations
- Roughly 16% of pedestrian fatalities occur at uncontrolled intersections

EDC

STEP

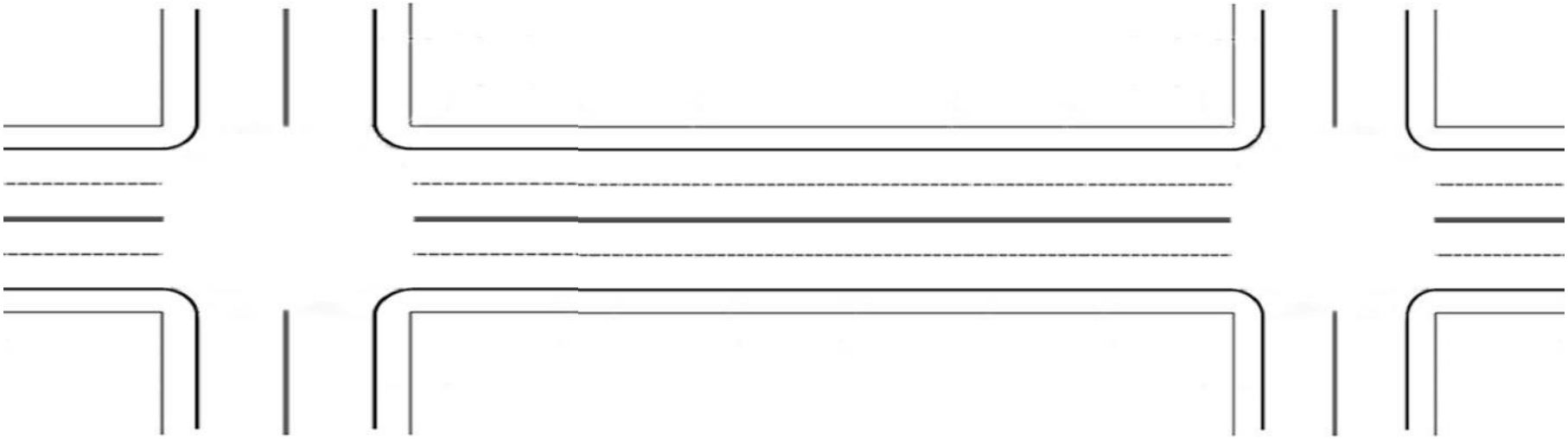
Safe Transportation for Every Pedestrian

every day counts

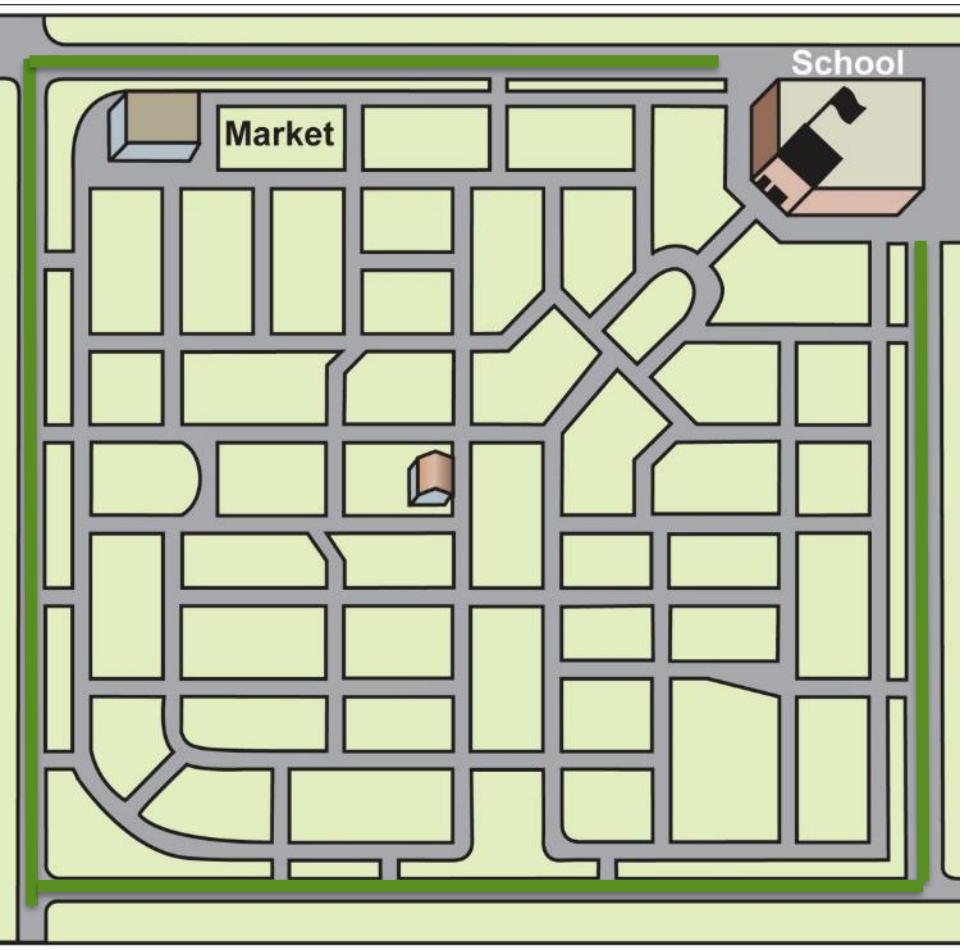


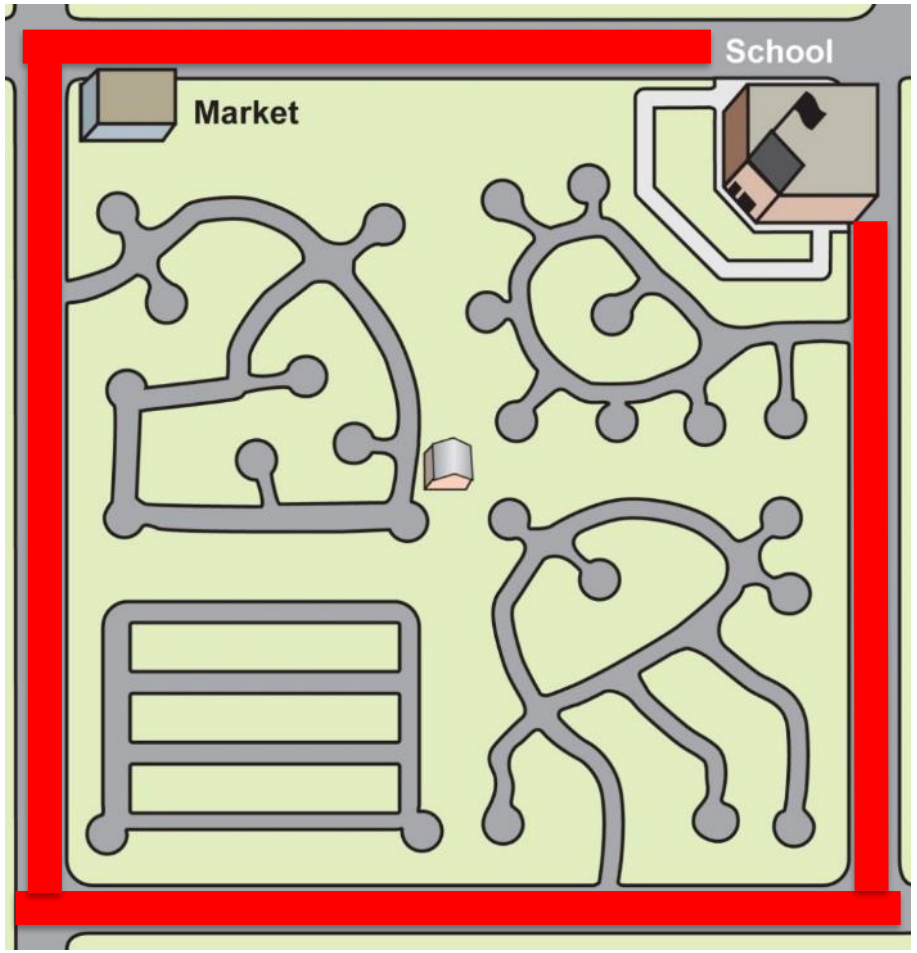


Enhanced Crossings @ Uncontrolled Locations

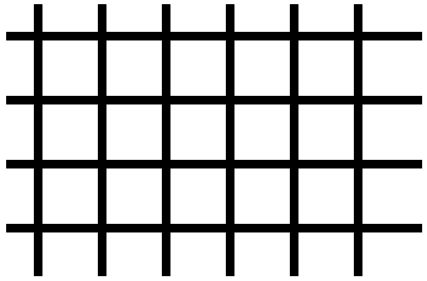


Connected vs. Lollipop Pattern Streets

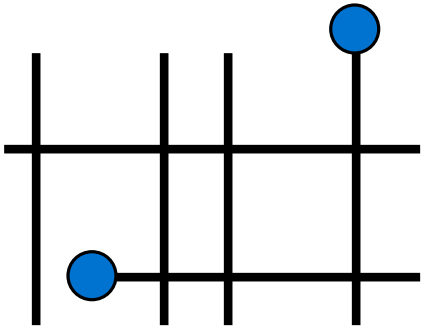




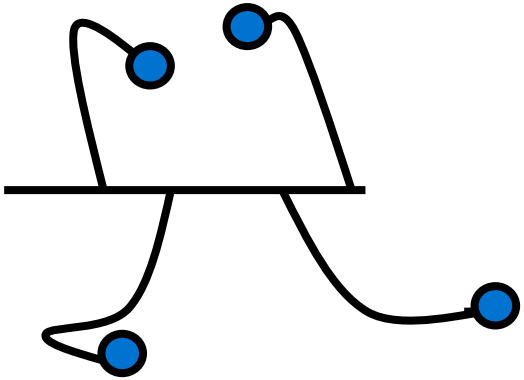
High Connectivity



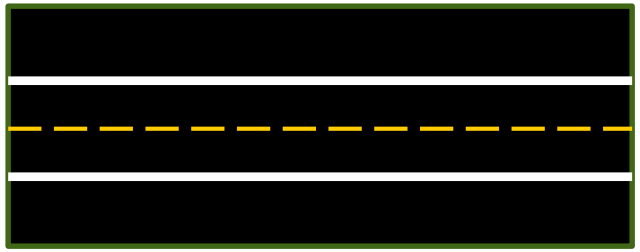
Moderate Connectivity

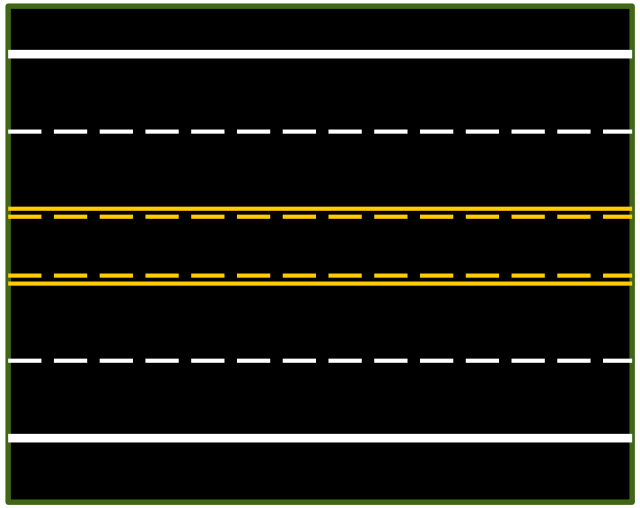


Low Connectivity



Travel Lanes Required





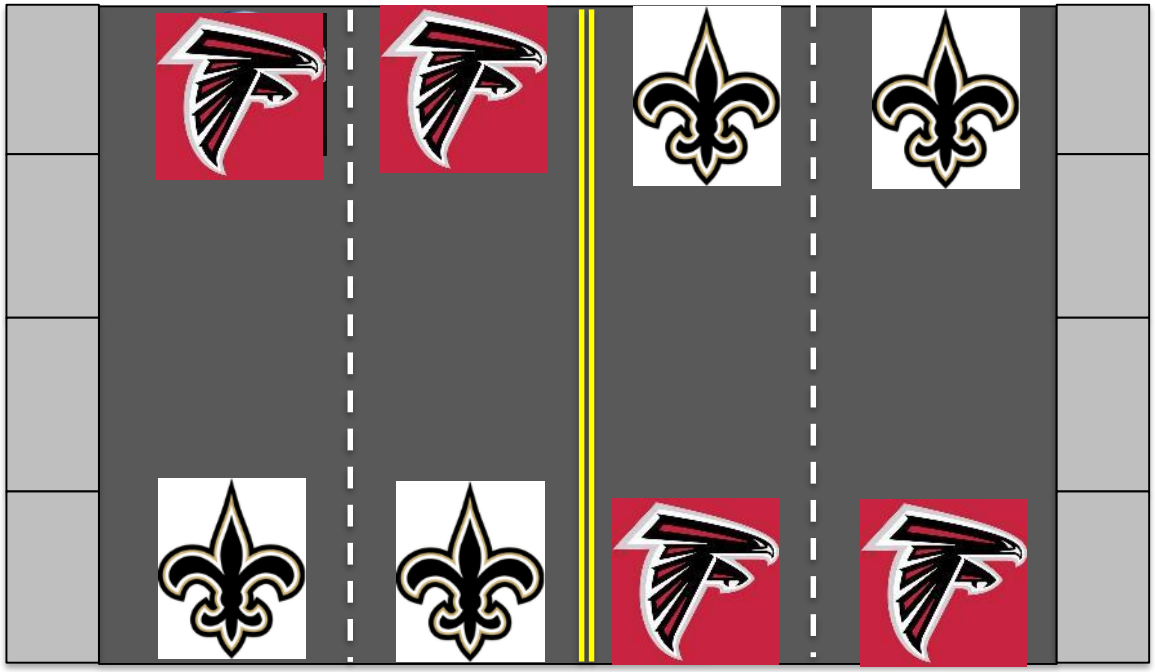
Question / Discussion:

How far are you willing to go out of your way for an "improved" crossing?

Would you walk: 25' 50' 75' 100' 125'

Challenges of Crossing Demo

- Need some volunteers
  - 8 Football fans that can catch and throw a football
  - One Football fan that can move fast



Goal: Empowering People to Improve Their Lives

STEP 3: Decide which enhancement(s) should be selected?

STEP 2: Understand the types of Roadway people are trying to cross?

STEP 1: Strong Pedestrian Safety Policies

EDC

STEP 1: Strong Pedestrian Safety Policies

Complete Streets

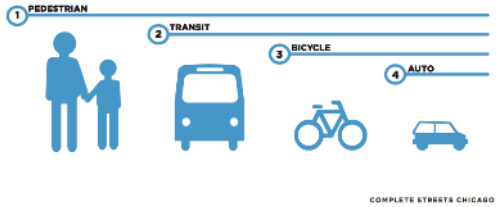
Design Manuals

Livable Communities

Pedestrian Safety Action Plan

Strategic Highway Safety Plan

Vision Zero

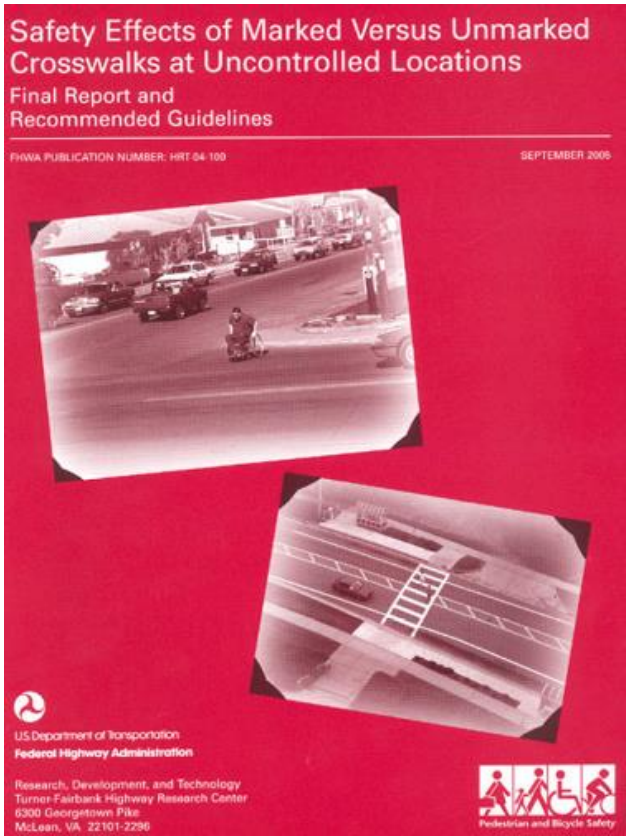


EDC

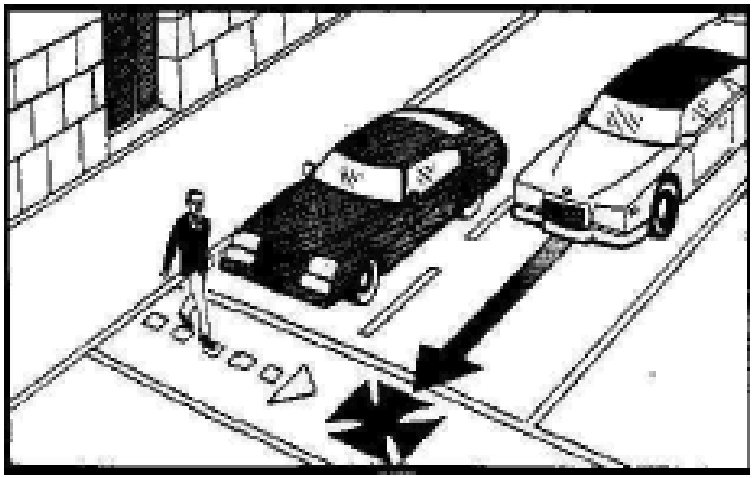
STEP 2: Understand the types of Roadway people are trying to cross?

Marked vs. Unmarked Analysis
Speeds < or = to 40 mph

- Two-lane roads: No significant difference in crash rate
- Multilane roads (3 or more lanes)
  - Under 12,000 ADT: no significant difference in crash rate
  - Over 12,000 ADT w/ no median: crashes marked > crashes unmarked
  - Over 15,000 ADT & w/ median: crashes marked > crashes unmarked



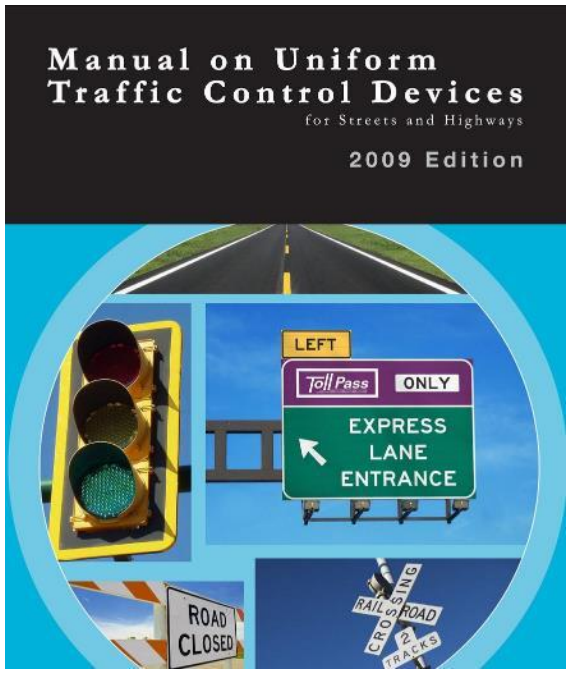
Pedestrian Multiple Threat



MUTCD States

New marked crosswalks **alone, without other measures** designed to reduce traffic speeds, shorten crossing distances, enhance driver awareness of the crossing, and/or provide active warning of pedestrian presence, should not be installed across uncontrolled roadways where the speed limit exceeds 40 mph and/or either:

- Has 4 or more lanes without a raised median or island and ADT of 12,000 or more, or
- 4 or more lanes with raised median island and ADT of 15,000 or more
- (2009 MUTCD Section 3B.18)



STEP 3: Decide which enhancement(s) should be selected?

"reduce traffic speeds, shorten crossing distances, enhance driver awareness of the crossing, and/or provide active warning of pedestrian presence"

Crosswalk Visibility Enhancements

Raised Crosswalks

Pedestrian Refuge Islands

Pedestrian Hybrid Beacon (PHB)

Road Diets

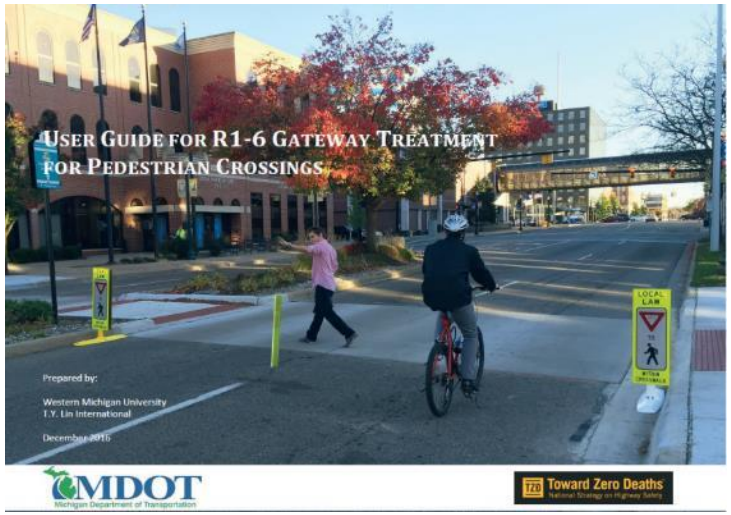
Crosswalk Visibility Enhancements
High Visibility Crosswalk

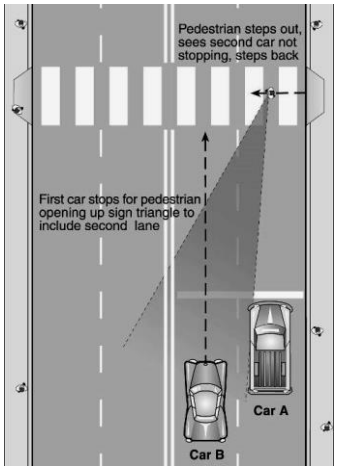
What Pedestrians See

Photo Source all 4: Michael Ronkin

What Drivers See

Crosswalk Visibility Enhancements
Signs & Lighting





R1-5b

R1-5c

Crosswalk Visibility Enhancements
Crosswalk Lighting

Photo source: Youtube screen capture SWARCO

- CRF 42% to 59%
  - V/P Lighting at intersections

Crosswalk Visibility Enhancements
Lighting Over Crosswalks

Fig 11. Traditional midblock crosswalk lighting layout

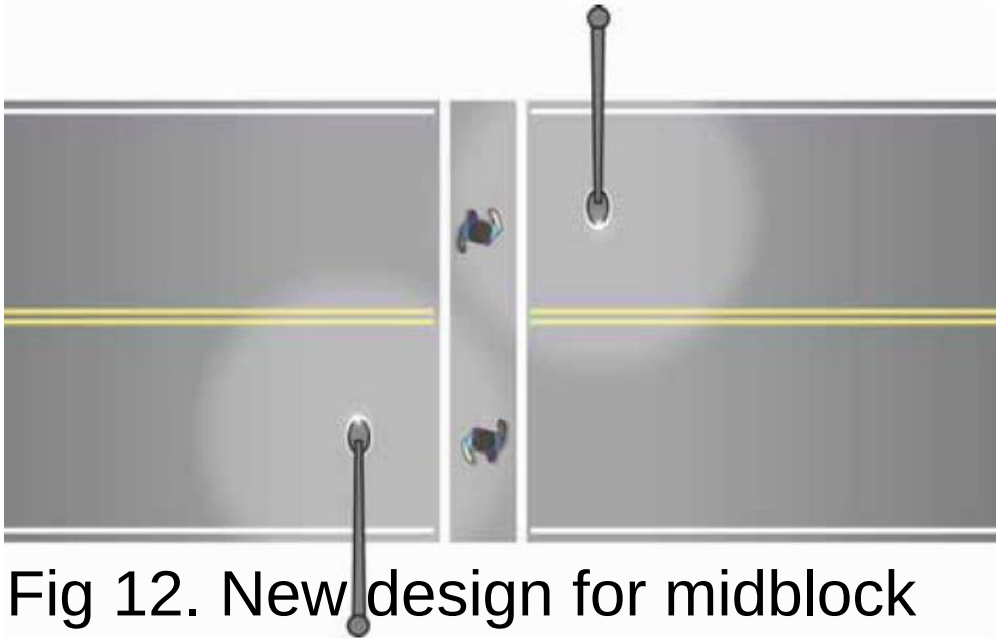
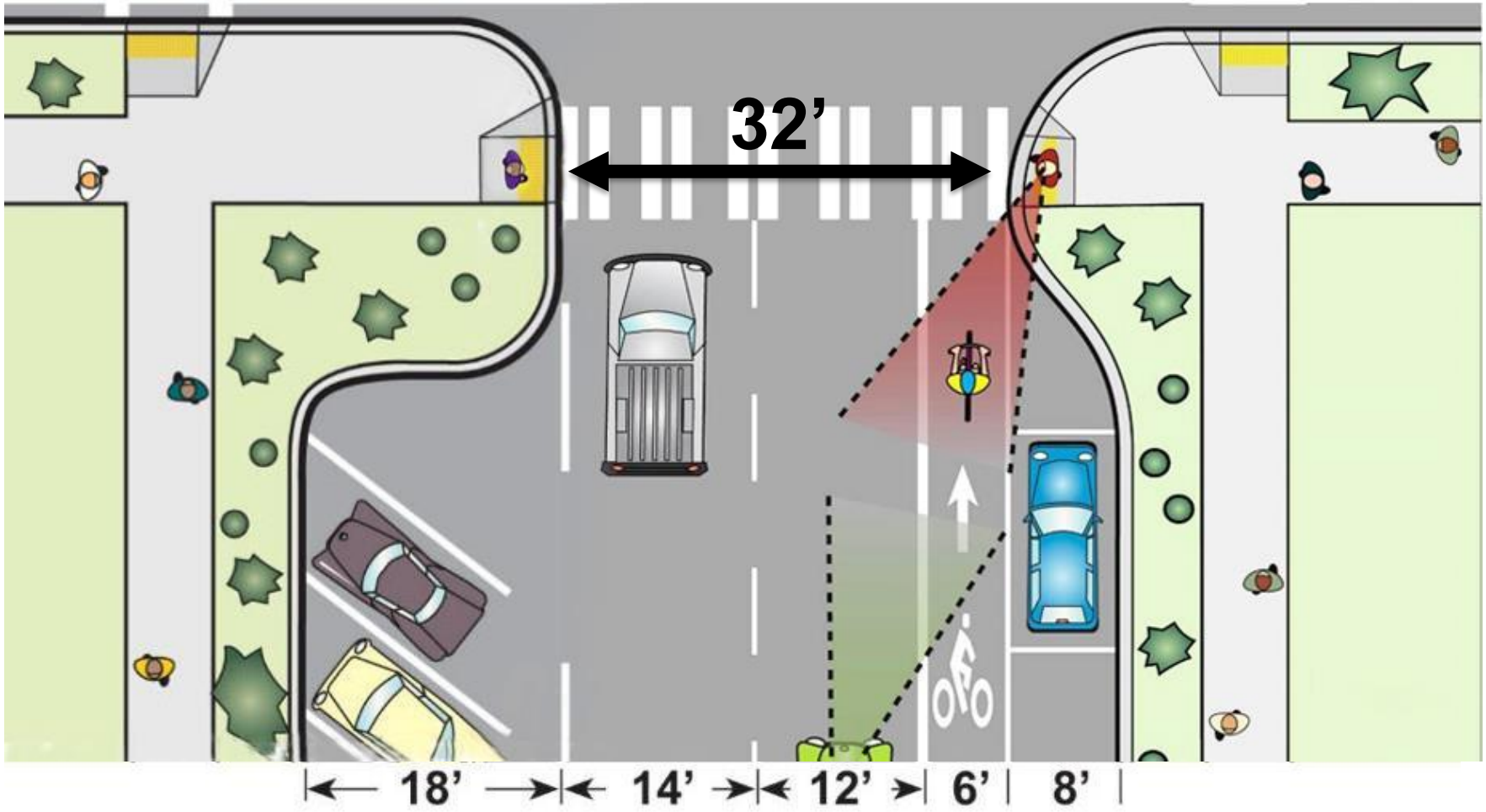


Fig 12. New design for midblock crosswalk lighting layout

Recommended lighting level: 20 lux at 5’ above pavement

Crosswalk Visibility Enhancements
Curb Extensions / Bulb Outs



Crosswalk Visibility Enhancements
Curb Extensions & Visual Friction

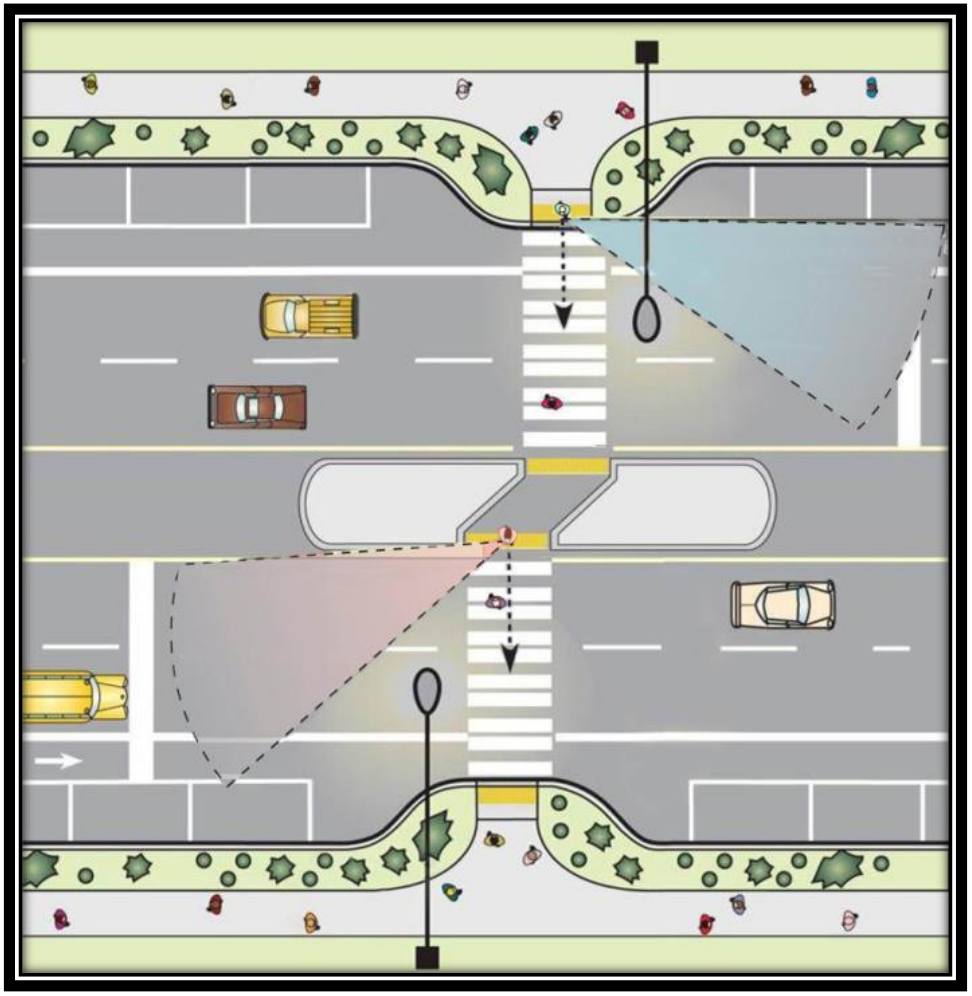
Raised Crosswalks

Photo Source: SRTS Guide

Photo Source: Seattle.gov Crosswalks

45% CRF V/P

Pedestrian Refuge Island: Breaks up complex crossing into 2 simpler ones



46% CRF V/P

Pedestrian Hybrid Beacons (PHB)

69% CRF V/P

1

Blank for drivers

2

Flashing yellow

3

Steady yellow

4

Steady red

5

Wig-Wag

Return to 1

PHB Florida Success Story

FDOT D7 installed three PHBs along Hillsborough Ave in the Fall of 2015.

Hillsborough Ave Preliminary Crash Data

Hillsborough Ave Bicycle and Pedestrian Crashes	
Year	Crashes
2010	17
2011	20
2012	27
2013	24
2014	14
2015	19
2016	7

PHB Installed Fall of 2015

Six year average 20 crashes per year

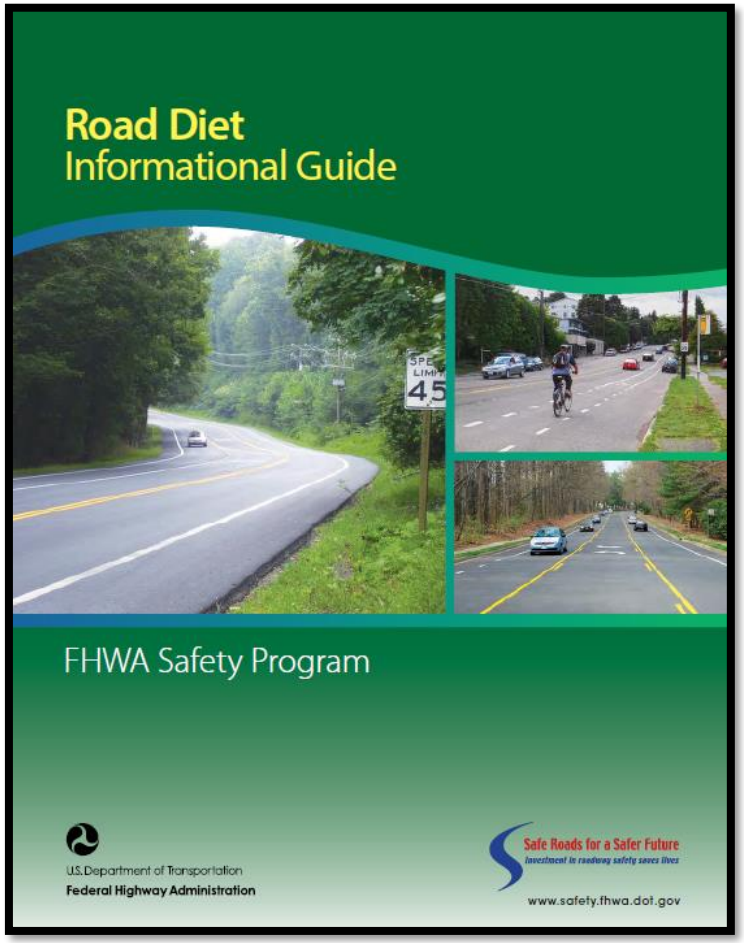
Corridor: **65% reduction** of all pedestrian and bicycle crashes 1st year of installation.

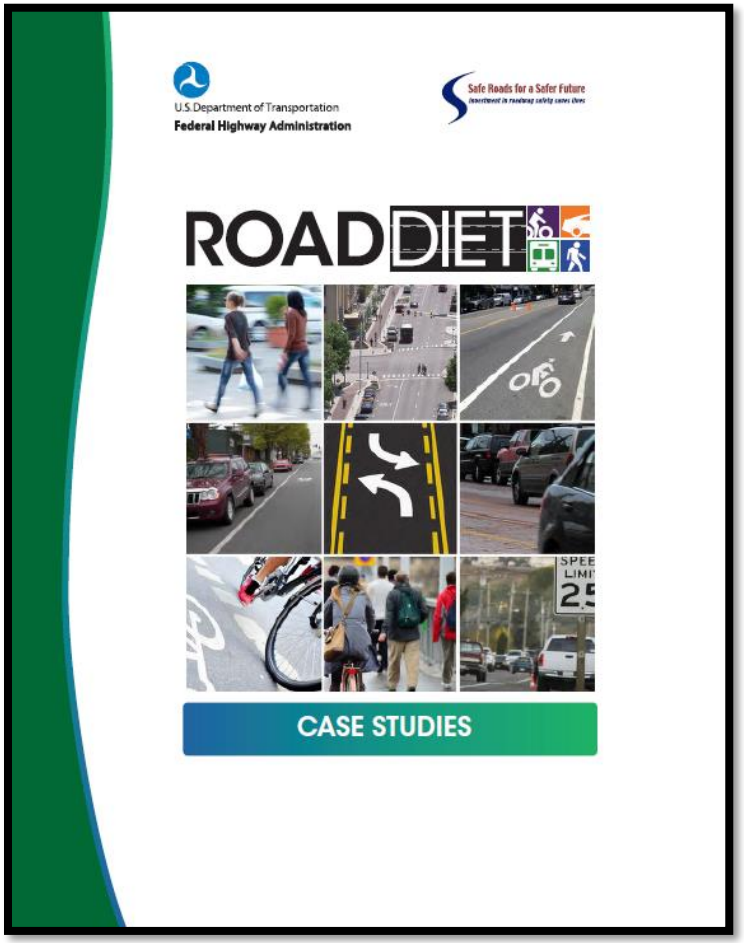
Road Diet / Roadway Reconfiguration

19%-47%
CRF All

- Reduce crossing distance
- Eliminate /reduce "multiple threat" crash types
- Install crossing island to cross in 2 simple steps
- Reduce top end travel speeds
- Buffer sidewalk from travel lanes (parking or bike lane)
- Reclaim street space for "higher and better use" than moving peak hour traffic

Road Diet Informational Guide & Road Diet Case Studies





https://www.fhwa.dot.gov/innovation/everydaycounts/edc-3/roaddiets.cfm

https://safety.fhwa.dot.gov/road_diets/

Goal: Empowering People to Improve Their Lives

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STEP 2: Understand the types of Roadway people are trying to cross?

STEP 1: Strong Pedestrian Safety Policies

Technical Assistance


STEP Workshops

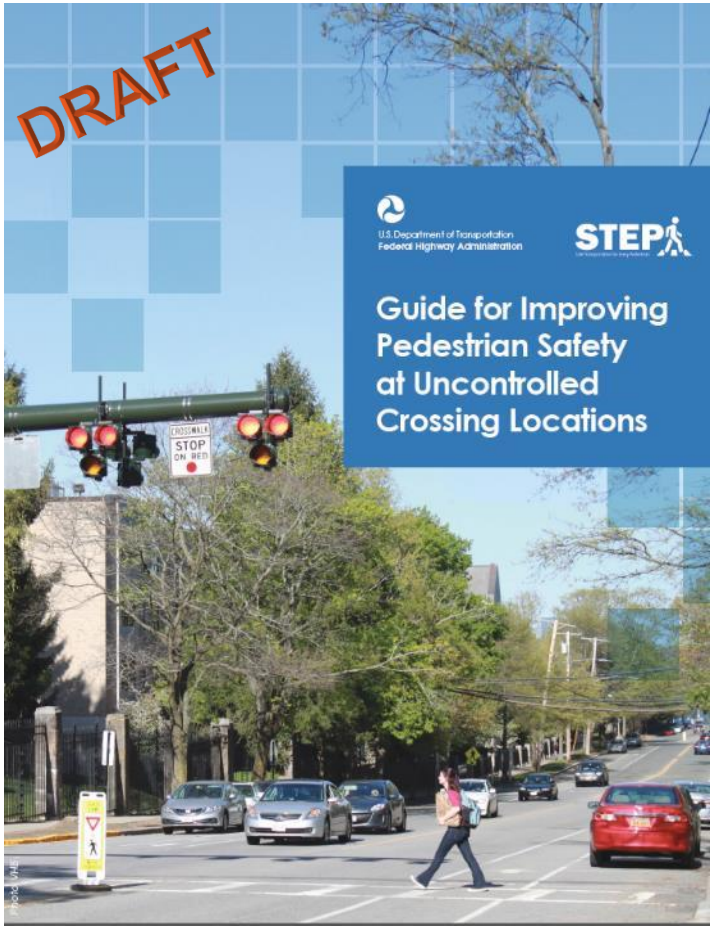

Road Safety Audits

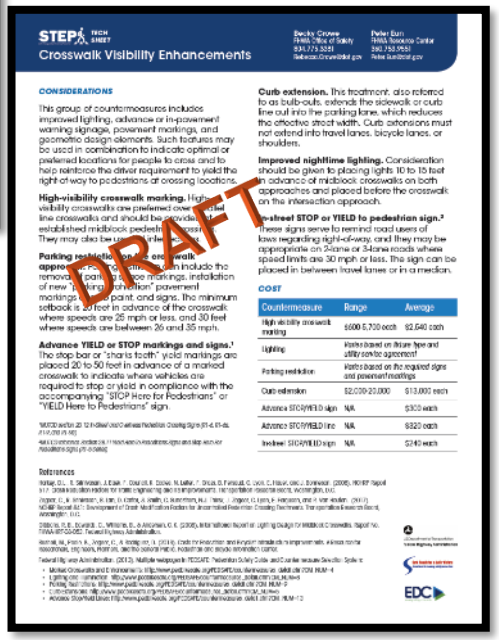

Guidance with Data Analysis


Developing Plans

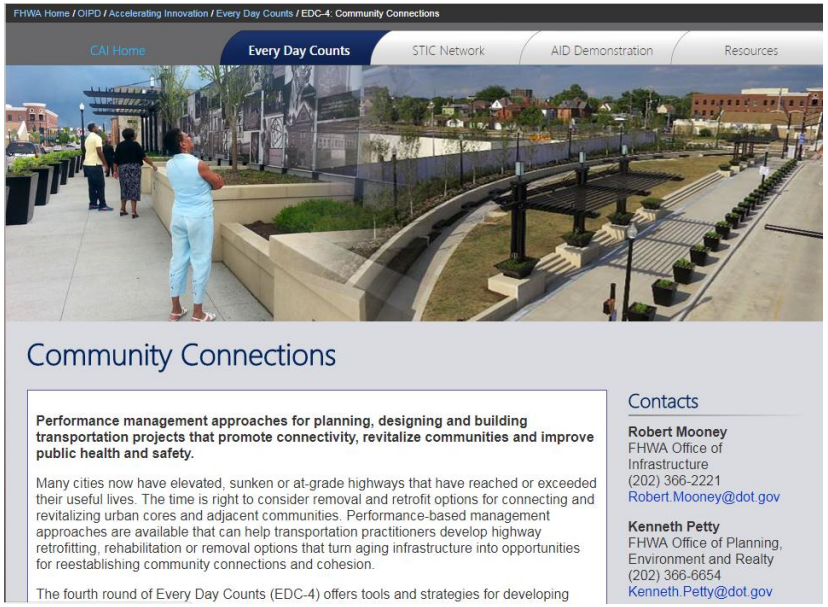

Other Technical Assistance Requests

New Guides and Materials being Developed





EDC4 Other Initiatives of Interest



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

https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/ddsa.cfm

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