



**Nashville MPO**

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Designing Streets for People

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# We know how to build right



# Yet many roads are built like this



Recently completed IL 64 expansion with destinations on both sides of the road. Can you spot the pedestrian?

# What is a Complete Street?



**A Complete Street is safe, comfortable & convenient for travel via automobile, foot, bicycle, & transit**

# Introductions 1: Who are you?

- Are you a Planner? Engineer? Elected Official? Interested Citizen? Other?
- City? County? Public Health? Advocacy? Other?



Monday, July 30, 2007

## 'Complete streets' programs give more room for pedestrians, cyclists

Advocates say roads should be used for more than just autos

By John Ritter  
USA TODAY

A growing number of states and local governments are rejecting a half-century of transportation practice and demanding that streets accommodate all types of travel, not just automobiles.

The concept of "complete streets" — with bike lanes, sidewalks and room for mass transit — has attracted a diverse national alliance of supporters, including advocates for senior citizens and the disabled.

Fourteen states, six counties, 30 regional governments and 52 cities have complete-streets policies, according to the National Complete Streets Coalition. In Illinois, a complete-streets bill awaits the governor's signature. In California, a bill passed one house.

Massachusetts and at least 11 cities — including Seattle, Honolulu, Chicago, Salt Lake City, Madison, Wis., and Jackson, Miss. — have approved complete-streets policies since last year, the coalition says.

Some states, such as Oregon and Florida, have had the equivalent of complete-streets policies for years, but the "overarching concept jelled just in the last few years," coalition



### Cities driving change

Some cities with the "complete streets" program:

- ▶ Charlotte
- ▶ Chicago
- ▶ Colorado Springs
- ▶ Honolulu
- ▶ Iowa City
- ▶ Salt Lake City
- ▶ San Diego
- ▶ San Francisco
- ▶ West Palm Beach, Fla.

Source: National Complete Streets Coalition

**In Colorado Springs:** Bicycle lanes were added to South Tejon Street.

### Role of demographics

■ Seniors' support, 4A

coordinator Barbara McCann says.

Sen. Tom Harkin, D-Iowa, plans to sponsor a federal complete-streets bill, spokeswoman Jennifer Mullen says.

"We didn't build sidewalks here for 50 years," says Norm Steinman, planning manager for Charlotte's transportation department. "Streets designed by traffic engineers in the '60s, '70s, '80s and '90s were mostly for autos."

Advocates say complete-streets can help fight obesity by making it easier to walk and give seniors who don't drive more options.

"As an aging society, we need to look at the ability to get where we want to go not just as the driver of a car," says Elinor Gutzler, AARP's livable communities director. "Walking safely, getting to the bus stop safely, has to become more possible."

Critics say the policies ignore decades of transportation planning that carved cities into networks of roads according to their function.

"It's not really a big fan of complete streets," says David Hartgen, emeritus transportation professor at the University of North Carolina at Charlotte. "You encourage drivers to divert to other neighborhoods. You're dumping your auto pollution on someone else. And ultimately it's not very effective. You haven't changed total travel."

The League of California Cities opposes the complete-streets bill because it would require local governments to adopt it without allocating more planning money.

"It's not that we don't agree with the ideas behind the bill," says Bill Higgins, the league's senior attorney.

Auto club AAA hasn't taken a position on complete streets, but addressing all street users' needs upfront "is a good thing," spokesman Geoff Sundstrom says.



# Introductions 2: Who are we?

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# Outline of Today's Workshop

## 1. Introduction: Why we need complete streets

- What complete streets are and aren't
- What an ideal complete street policy looks like
- Decision-making processes – a new method

## 2. Implementation:

- Performance Measures: Getting what you want out of your streets
- Street classification – a new way to look at streets
- Road diets – making room for complete streets

## 3. Panel discussion: what is Knoxville doing to adopt Complete Streets?



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2. Implementation:
  - Performance Measures: Getting what you want out of your streets
  - Road diets – making room for complete streets
  - Street classification – a new way to look at streets
  - Project development practices that get you Complete Streets
3. Project design challenge: A new approach to an existing road
4. Panel discussion: what is Knoxville doing to adopt Complete Streets?



# Everyone wins with Complete Streets



# What is a Complete Streets policy?

Ensures that the **entire right-of-way** is designed for all users



# What is a Complete Streets policy?

Ensures that the **entire right-of-way** is designed for all users



# Complete streets policies provide for all users



US Access Board



# Why have a complete streets policy?

- To make the needs of all users the **default** for **everyday** transportation planning practices



# Why have a complete streets policy?

- To gradually create a complete **network** of roads that serve all users



# Why have a complete streets policy?

To shift  
transportation  
investments so  
they create better  
streets  
**opportunistically**



# Why have a complete streets policy?

➤ To save **money**:

Retrofits cost more than getting it right initially



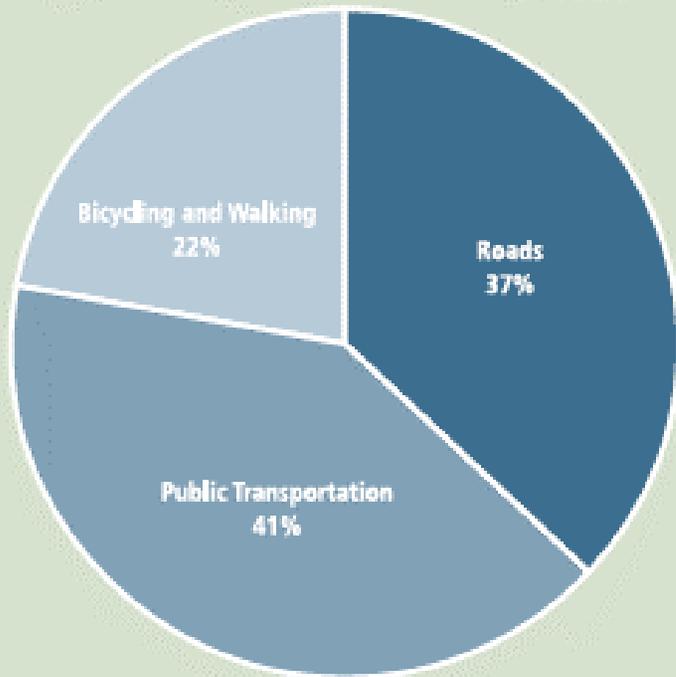
# Who wants Complete Streets?

- **Most** Americans would rather **drive less** & walk more
- **Transit is growing faster** than population or driving
- About **one-third** of Americans **don't drive**:
  - ✓ 21% of Americans over **65**
  - ✓ Children **under 16**
  - ✓ **Low income** Americans can't afford to drive



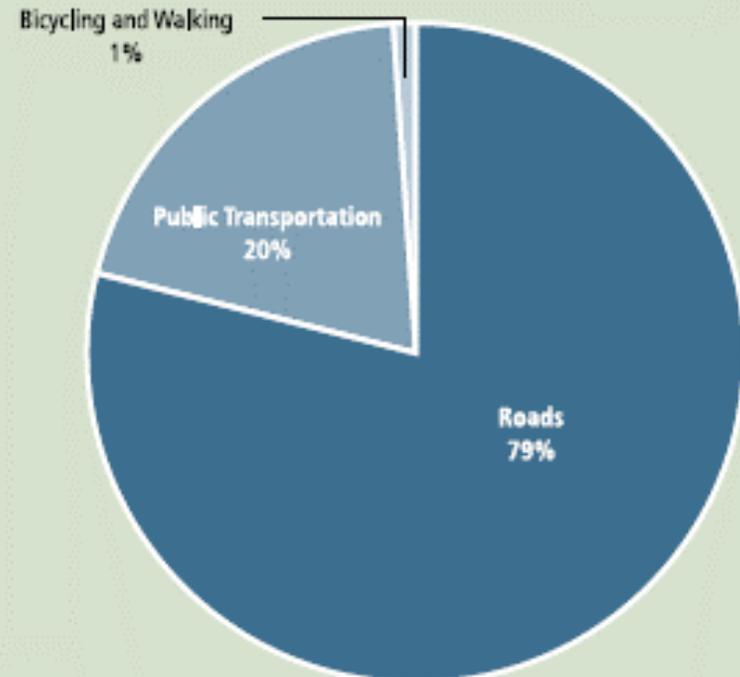
# Americans want complete streets

How Respondents Would Allocate Transportation Funding



<b>Roads</b>	<b>37%</b>
<b>Public Trans</b>	<b>41%</b>
<b>Bike/walk</b>	<b>22%</b>

How Transportation Funding is Currently Allocated



<b>Roads</b>	<b>79%</b>
<b>Public Trans</b>	<b>20%</b>
<b>Bike/walk</b>	<b>1%</b>

From Active Transportation for America: the case for Increased federal investment in bicycling and walking. RTC 2008



# Benefits: older Americans

- **21% over 65** do not drive
- Over 50% of non-drivers **stay at home** on a given day because they lack travel options
- 54% of older Americans living in inhospitable neighborhoods say they'd **walk and ride more** often if things improved



# Benefits: **health**

- Now Americans move without moving
- 60% are at risk for **diseases** associated with **inactivity**:
  - Obesity
  - Diabetes
  - High blood pressure
  - Other chronic diseases

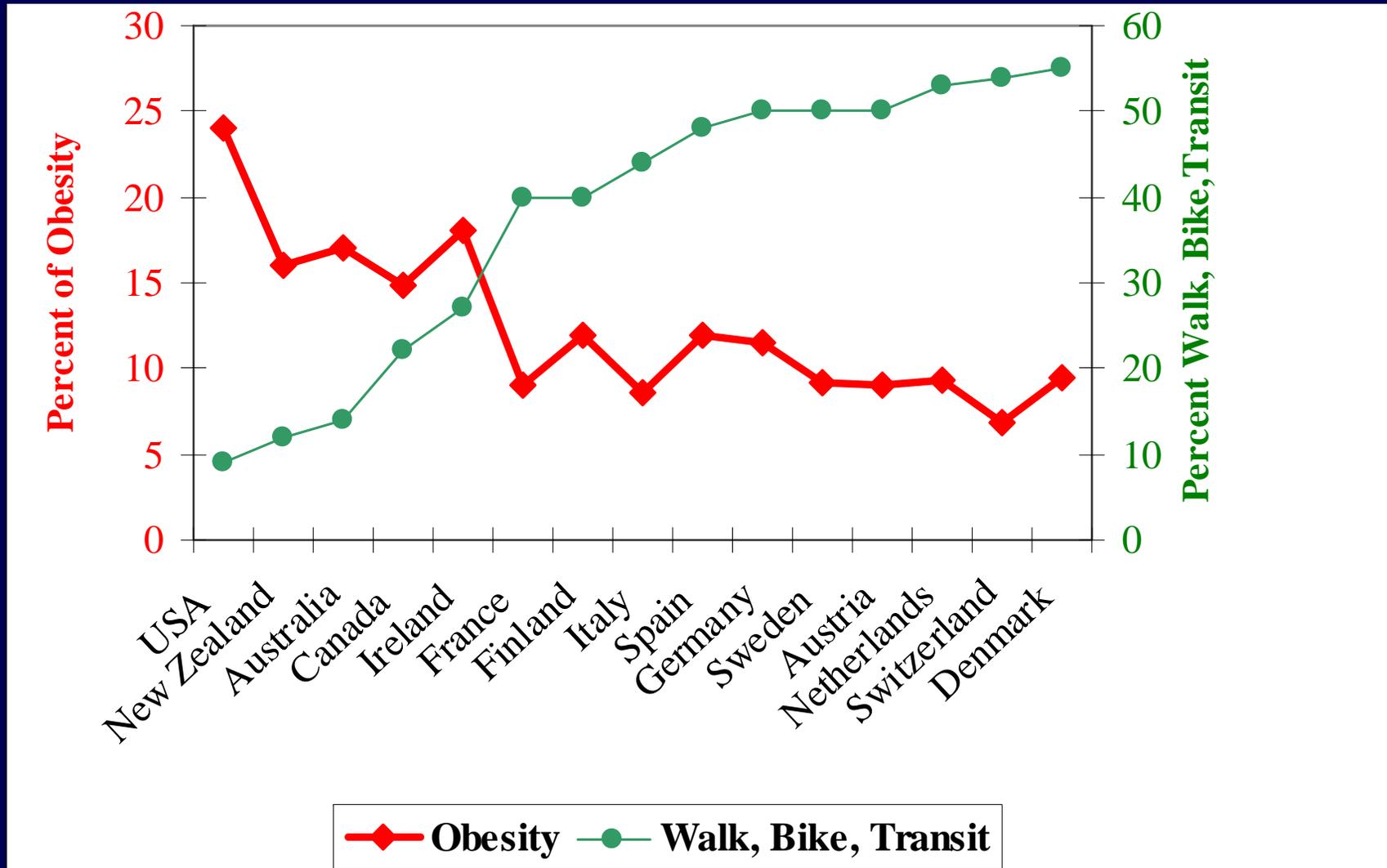


# Benefits: **physical activity**

- Residents more likely to **walk** in a neighborhood w/ **sidewalks**
- Cities with more **bike lanes** have higher levels of **bicycling**
- 1/3 of regular **transit users** meet **minimum daily physical activity** requirement during their commute



# Benefits: physical activity



Source: Pucher, "Walking and Cycling: Path to Improved Public Health,"  
Fit City Conference, NYC, June 2009

# Benefits: **safety**

- **Intersections** designed for pedestrians can reduce pedestrian risk by 28%
- **Sidewalks** reduce pedestrian crash risk by 88%



# Benefits: **people with disabilities**

- Improved mobility for disabled people and reduced need for expensive paratransit service



# Benefits: better use of transit funds



A year of **paratransit service**  
for a daily commuter:  
**\$38,500**



Making a transit stop  
**accessible:**  
**\$7,000-\$58,000**

Source: Maryland Transit Administration



# Benefits: **the environment**

- Fewer emissions
- Less noise pollution
- Less wear & tear on our roads
- Less need to widen roads



# Benefits: **Less need to widen roads**

## Trips in metro areas:

- **50%** - less than 3 miles
- **28%** - less than 1 mile:
  - **65%** of trips under 1 mile are now taken by car



# Benefits: **the economy & your wallet**

- **Multi-modal streets:**
  - Increase home values
  - Revitalize retail
  - People can leave their car at home



# How do Complete Streets change the built environment?



# CS changes intersection design



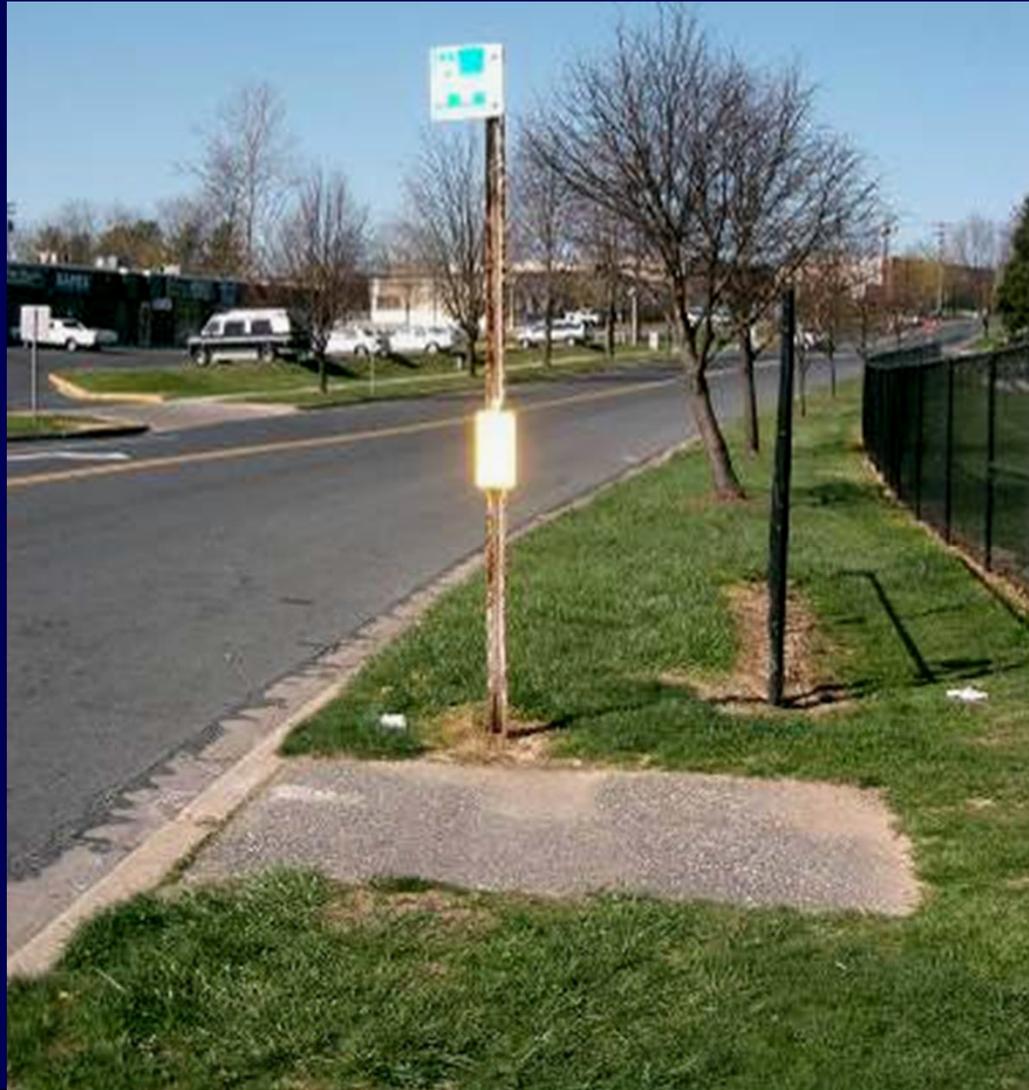


# CS changes bicycling





# CS changes transit





# CS changes accessibility





# Complete streets and trails

- Streets provide **access** to trails
- Complete streets and trails form a **comprehensive** non-motorized network
- CS take pressure off **overcrowded** trails



# Complete Streets is NOT:

- A design **prescription**
  - A mandate for **immediate** retrofit
  - A **silver bullet**; other initiatives must be addressed:
    - *Land use (proximity, mixed-use)*
    - *Environmental concerns*
    - *VMT reduction (ie, pricing, gas taxes)*
- ✓ (but complete streets will help!)

# What does a complete street look like?

- One size doesn't fit all:
  - Complete Streets doesn't mean **every** street has sidewalks, bike lanes and transit

# What does a complete street look like?



There is no magic formula

# The many types of Complete Streets



**One crossing completes a Safe Route to School**

# The many types of Complete Streets



**Shoulder bikeways on rural roads**

# The many types of Complete Streets



**Busy multi-modal thoroughfares**

# The many types of Complete Streets



Transit routes

# The many types of Complete Streets



**Suburban thoroughfares**

# The many types of Complete Streets



**Residential skinny streets**

# The many types of Complete Streets



**Low traffic streets**

# The many types of Complete Streets



**Historic Main Street**

# Complete Streets & Context Sensitive Solutions

- Complete Streets doesn't mean **every street** has sidewalks, bike lanes, transit
- Context sensitivity:

1. External context: land use
2. Internal context: who is **likely to use** the street - bicyclists, pedestrians, transit users, drivers?



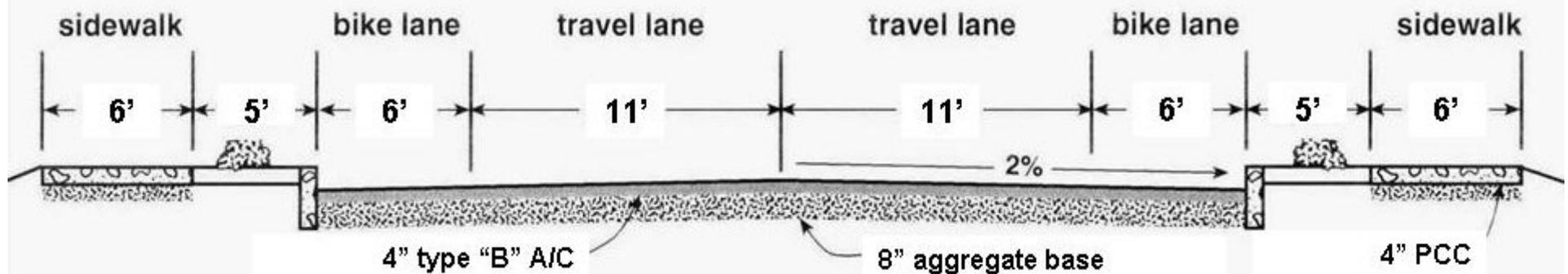
Illustration: AARP

# What do the design guides tells us?

The AASHTO “Green Book” states:

“Sidewalks are *integral parts* of city streets”

Not added to – a part of!



“Shoulders are desirable on <...> urban arterials”

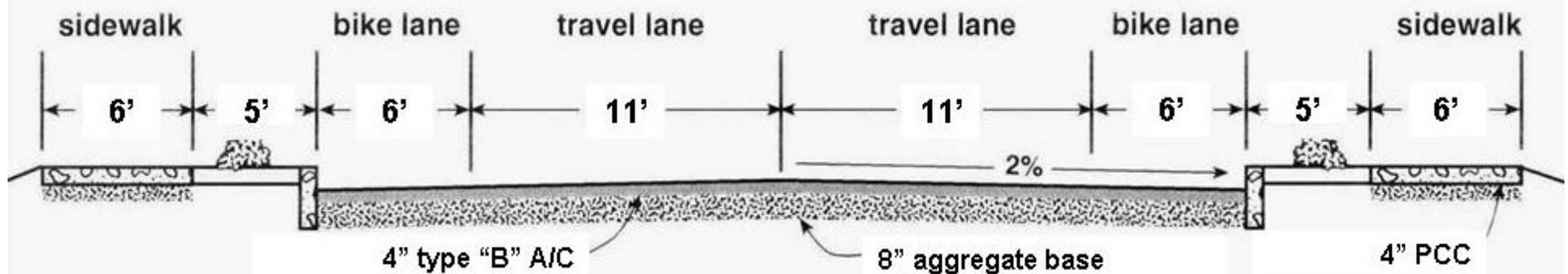
Bike lanes are shoulders reserved for bicycle use!

AASHTO: American Association of State Highway and Transportation Officials  
Green Book: A Policy on Geometric Design of Highways and Streets



# Permission

Many transportation engineers and planners know how to build good streets; they're seeking permission to do so

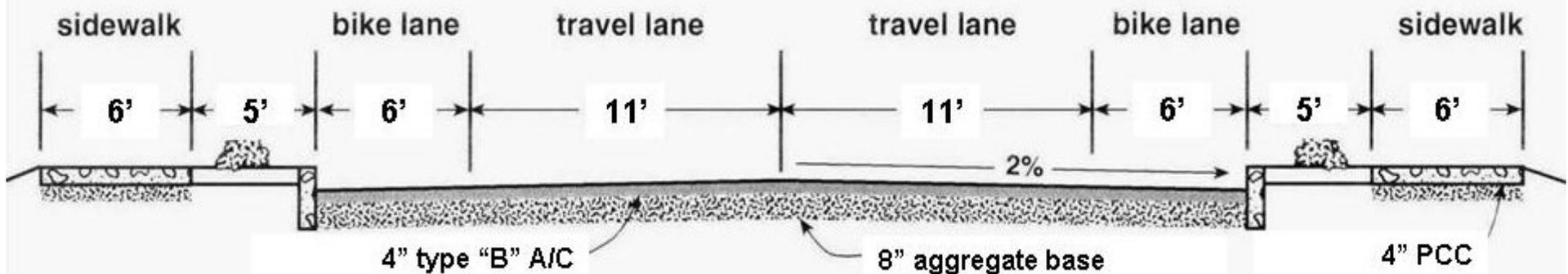


# What about funding?

- Complete streets is about using **existing resources** differently:
  - STP, Equity Bonus, CMAQ, TE, State, Bond measures, gas tax, sales taxes, and now the stimulus \$... the usual suspects
- While retrofit funding is important, it is not necessary to get started
- **Additional** funding is not needed

# Does it cost more?

1. Avoid costly retrofits
2. Minimal additional funding
3. Save money with better design



# Sample low-cost improvements:

- Restripe for bike lanes without moving curbs/drainage
- Do not construct overly wide lanes (12' instead of 11')
- Sidewalks installed during drainage project adds little cost
- Timing signals to control speeds and increase safety
- Countdown ped signals reduce crashes



# Transformative Moment

- Faltering national **economy**
- Increasing **gas prices**
- **Obesity** epidemic (CDC now recommends CS to prevent obesity)
- Growing awareness: **quality of life**
- Climate change & **sustainability**



# A Complete Streets Policy

... ensures that all users of the transportation system, including pedestrians, bicyclists, transit users, children, older individuals, and individuals with disabilities, are able to travel safely and conveniently on streets and highways.



# Complete Streets

- Are sensitive to the community
- Serve adjacent land uses
- Serve all who potentially will use the street

# Status Nationally

- In 2008, 20 communities adopted CS policies.
- So far in 2009, 12 more have done so
  - **The 100 mark was reached recently!**
- Senator Tom Harkin (D-IA) & Congresswoman Doris Matsui (D, CA-5) introduced the Complete Streets Act of 2009 in March
- Large % of CS workshops are sponsored by health organizations



# EXERCISE

**How would your community benefit from a Complete Streets policy?**

**Each table brainstorm 3-5 ideas**

## **Complete Streets benefits for our community: Nashville MPO**

- 1. Access**
- 2. Health**
- 3. Civic engagement, community building, a sense of place**
- 4. Educate public officials about true costs of infrastructure**
- 5. Multi-stakeholder, non-partisan issue**
- 6. Encourage new users to walk and bicycle**
- 7. Save \$ on health care**
- 8. Common sense approach to funding, not piecemeal**



## Complete Streets benefits for our community: Miami Valley OH

1. Connecting people to trails and to trails to each other.
2. Changing attitudes.
3. Livability.
4. Increased community interaction. (3)
5. Reducing paratransit costs.
6. Economic development. (3)
7. Improving mobility for seniors, the disabled, and other travelers.
8. Creating a sense of place (more Oregon districts). (2)
9. Health benefits.
10. Reducing community isolation. (2)
11. Better health through accessing facilities.
12. Incomplete streets are costly and inefficient to maintain. (2)
13. Public education leverages political pressure for CS.
14. Intermodal connectivity.
15. Provide transportation for those w/ low income.
16. Establishes framework for design.
17. Some CS projects lower costs.
18. Reduce per capita vehicle trips.
19. Improved safety. (2)



Promotes more compact, diverse land use and housing.

CS promotes attractive public design.

## **Complete Streets benefits for our community: Baton Rouge**

- 1. Integrate design elements into beginning of project/reduce costs (2)**
- 2. Attract attention about CS**
- 3. Influence locals about design decisions**
- 4. Avoid nimbyisms (Especially IMBY)**
- 5. Provide good examples**
- 6. Economic development – place making (3)**
- 7. Improve public transportation**
- 8. Increase physical activity and health benefits (3)**
- 9. Create Connectivity/Compact development (3)**
- 10. Improve safety (3)**
- 11. Access management**
- 12. Socialization**
- 13. Improve air quality**
- 14. Clarifying liability issues**
- 15. Managing priorities**
- 16. Increase public input**
- 17. Increase real estate value**
- 18. Improve independence/options for travelers**



## Complete Streets benefits for our community: Moorhead/Fargo

1. Increased safety (6).
2. Acknowledge the high demand for transport choices (4)
3. Environmental benefits/Sustainability (4)
4. Health benefits (4)
5. Promotes Mixed-Use development/Supports land use objectives (2)
6. Gives permission to use available designs (2)
7. Encourages retrofitting (2)
8. Cost savings (2)
9. Increased knowledge/awareness (2)
10. Increased neighborhood permeability/Connectivity (2)
11. Slow traffic/Peace of mind(2)
12. Sense of pride/the city for good first impression.
13. Quality of life.
14. Meeting an emerging housing demand.
15. Promotes grassroots collaboration
16. Improved transit
17. Increased property values.
18. More accessibility for the elderly, children, disabled.



19. allocation of ROW use/Less pavement

## **Complete Streets benefits for our community / Chattanooga TPO:**

- 1. Health**
- 2. Air quality (2)**
- 3. Social interaction**
- 4. Save \$**
- 5. Safety –fewer cars, eyes on the street**
- 6. Aesthetics**
- 7. Accessibility - universal**
- 8. Encourage all modes / Transportation choices**
- 9. Inviting roads – connectivity**
- 10. Consistent approach**



## **Complete Streets benefits for our community / Northwest Georgia:**

- 1. Economic benefit – e.g., streetscape project in Rockmont increased retail sales (2)**
- 2. Safety (2)**
- 3. Accessibility for people with disabilities**
- 4. Air quality—reduced pollution from increased walking and biking**
- 5. Aesthetics**
- 6. Commercial centers are more accessible for lower social economic groups**
- 7. Communication among various departments**
- 8. Sense of place/community**
- 9. Outlying areas have access to downtown**
- 10. Resolve parking needs**
- 11. Economic re-development**
- 12. Bike and pedestrian facilities in project planning**
- 13. Elected officials support – don't need to lobby**
- 14. Health benefits**
- 15. Increased connectivity (see also 6 and 9)**



## **Complete Streets benefits for our community / Dakota County:**

- 1. Increased physical activity (4)**
- 2. Safety – all individuals/neighborhoods (3)**
- 3. Increased transit (2)**
- 4. Enhanced community image – attractive to new businesses/residents (econ dev) (2)**
- 5. Decreased isolation of seniors**
- 6. Less need for large parking lot – more green!**
- 7. 4-season trail seasons – plow the snow**
- 8. Increased access to schools/remove barriers**
- 9. A clear framework for redevelopment/retrofits AND new development**
- 10. Make CS the norm**
- 11. Encourage neighborhood commercial**
- 12. Systems approach- choice of travel modes**
- 13. Potential savings – no need to widen roads**
- 14. Longer road life**
- 15. Reduce personal travel costs**
- 16. Fewer emissions**
- 17. Places where you can live without a car**
- 18. Better access to parks; have the road to the park be part of your experience**



## **Complete Streets benefits for our community / Duluth Superior MPO:**

- 1. Health (5)**
- 2. Safety (3)**
- 3. Increased prop values, retain & recruit citizens (2)**
- 4. Decreased travel time by other forms of travel (2)**
- 5. Expanded opportunities**
- 6. Improved community attitude via psychology shift (2)**
- 7. Cost savings**
- 8. Reduced need for surface parking, particularly DT**
- 9. Reduced impervious surface (flood reduction, stormwater improvements, water quality)**
- 10. Better design for sidewalks**
- 11. Improved access provisions by developers**
- 12. Help community prepare a CS plan**
- 13. Considered more often by planners & engineers**
- 14. Increased household income improves economy**
- 15. Healthy habits early in life**
- 16. Promotes family (partly by more family time)**
- 17. Promotes citizen surveillance**
- 18. More free time for parents who shuttle their kids**

