

# An Urgent Call for Healthy Communities. (But does it work?)

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June 19, 2015



Could this ever become normal  
rather than exceptional?

# The intuitive challenges:

- Health results from **personal decisions & habits.**
- Even if we build it, **will they come?**
- Shouldn't the **free market** dictate how we build our cities & towns?
- So what do you want **me to do about it?** That's not even my job!



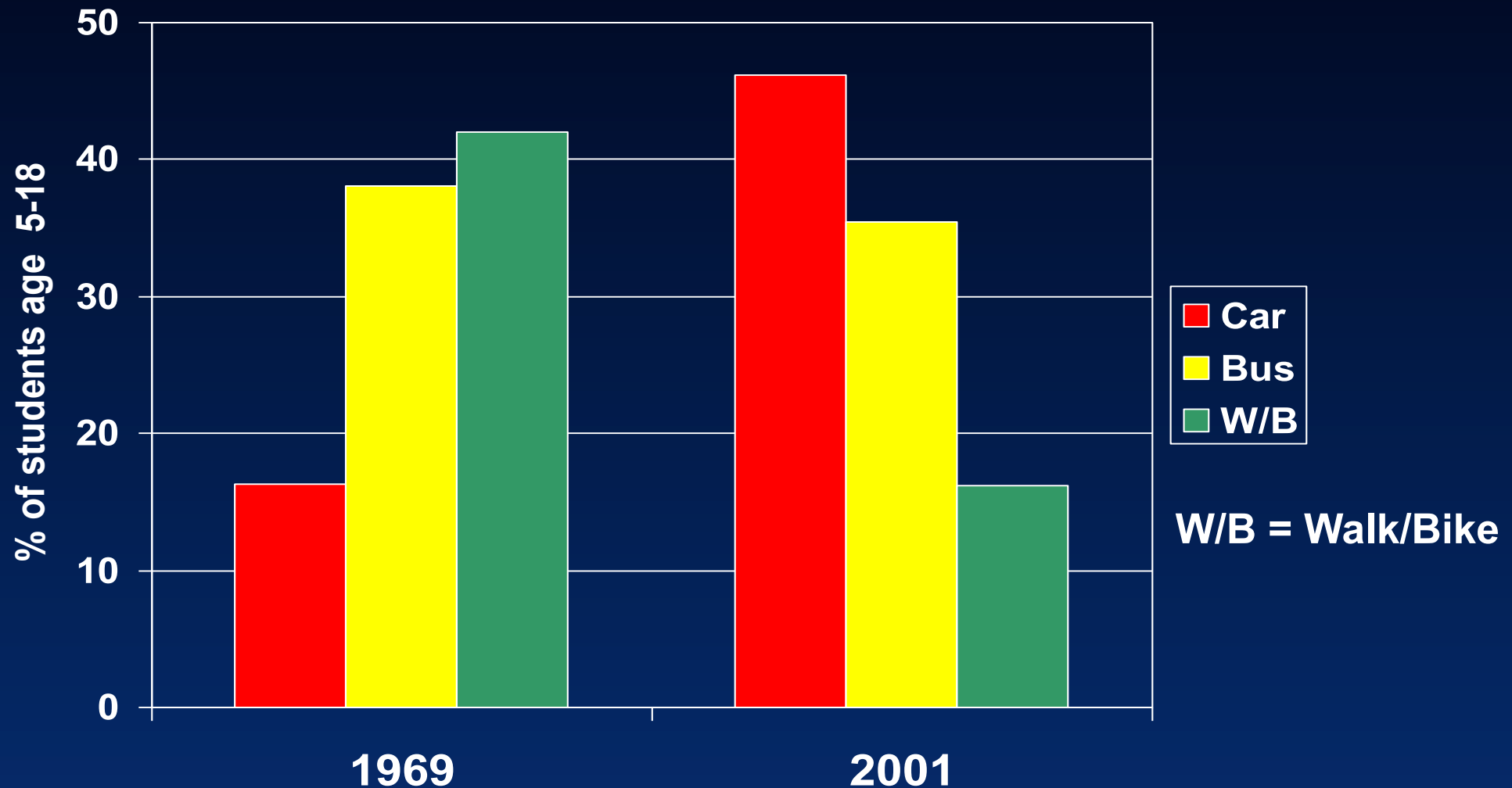
Typical dismissal traffic at US schools . . .

# Youthful recollections



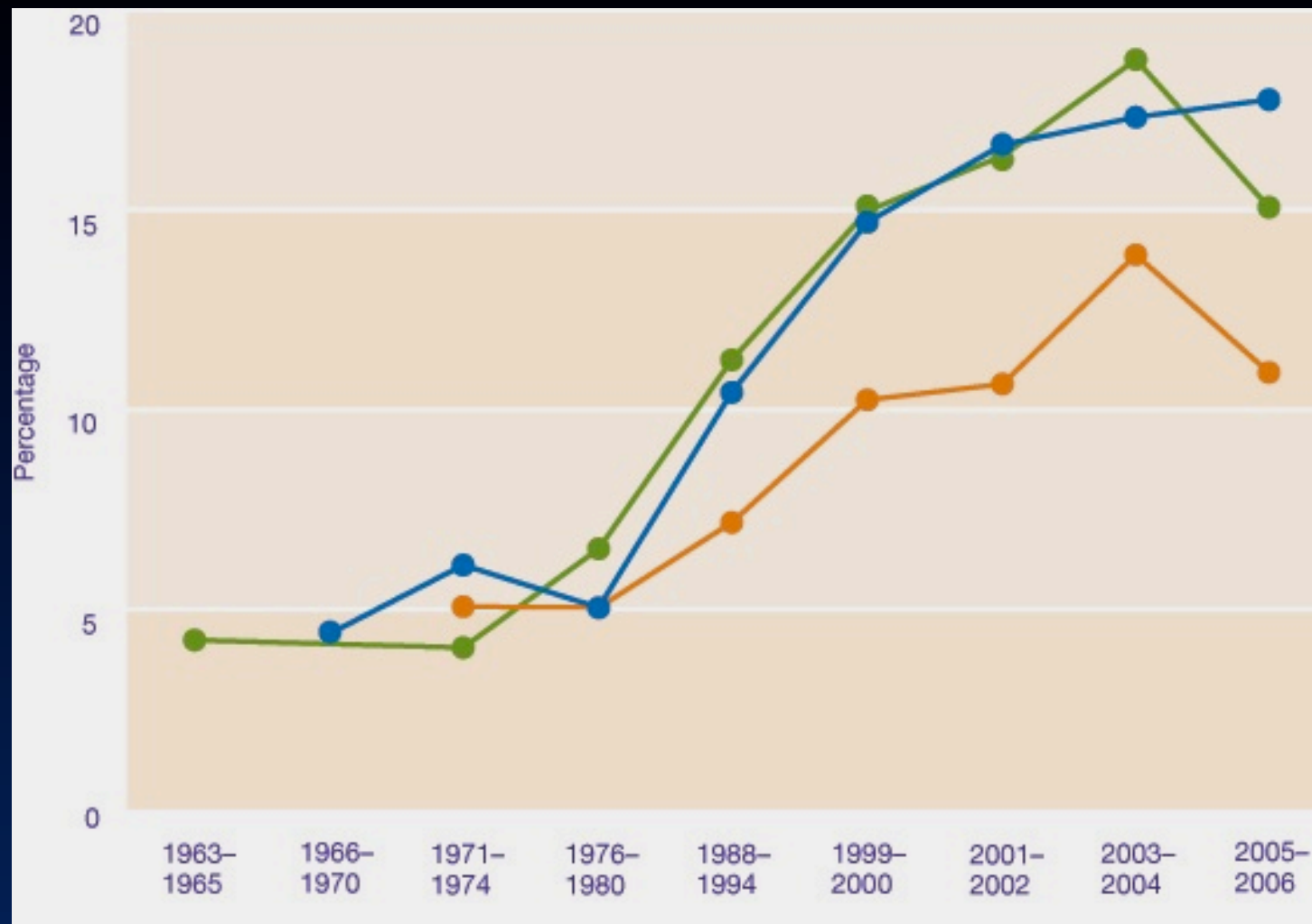
# Changes in Walking & Cycling to School, 1969 to 2001

Ham et.al., *Jour. of Physical Activity & Health*, 2008, 5, 205-215



# Trends in Childhood Obesity & Overweight

- 2–5 Years of Age
- 6–11 Years of Age
- 12–19 Years of Age



CDC, National Center for Health Statistics. *National Health Examination Surveys (NHANES) II (ages 6–11) and III (ages 12–17), and NHANES I, II and III, and 1999–2006.*

[www.rwjf.org/files/publications/annual/2008/year-in-review/](http://www.rwjf.org/files/publications/annual/2008/year-in-review/)

[www.markfenton.com](http://www.markfenton.com)



30-Nov-2009

The real risk . . .



Lenore Skenazy  
[www.freerangekids.com](http://www.freerangekids.com)

[www.markfenton.com](http://www.markfenton.com)

## The Rant:

Change our thinking. It's *not* just an obesity epidemic. It's twin epidemics of **physical inactivity** and **poor nutrition**.\*

\* Two of the three biggest drivers of skyrocketing healthcare costs.

# The bad news in just three numbers:

**30** minutes of daily physical activity recommended (**60** min. for youth).

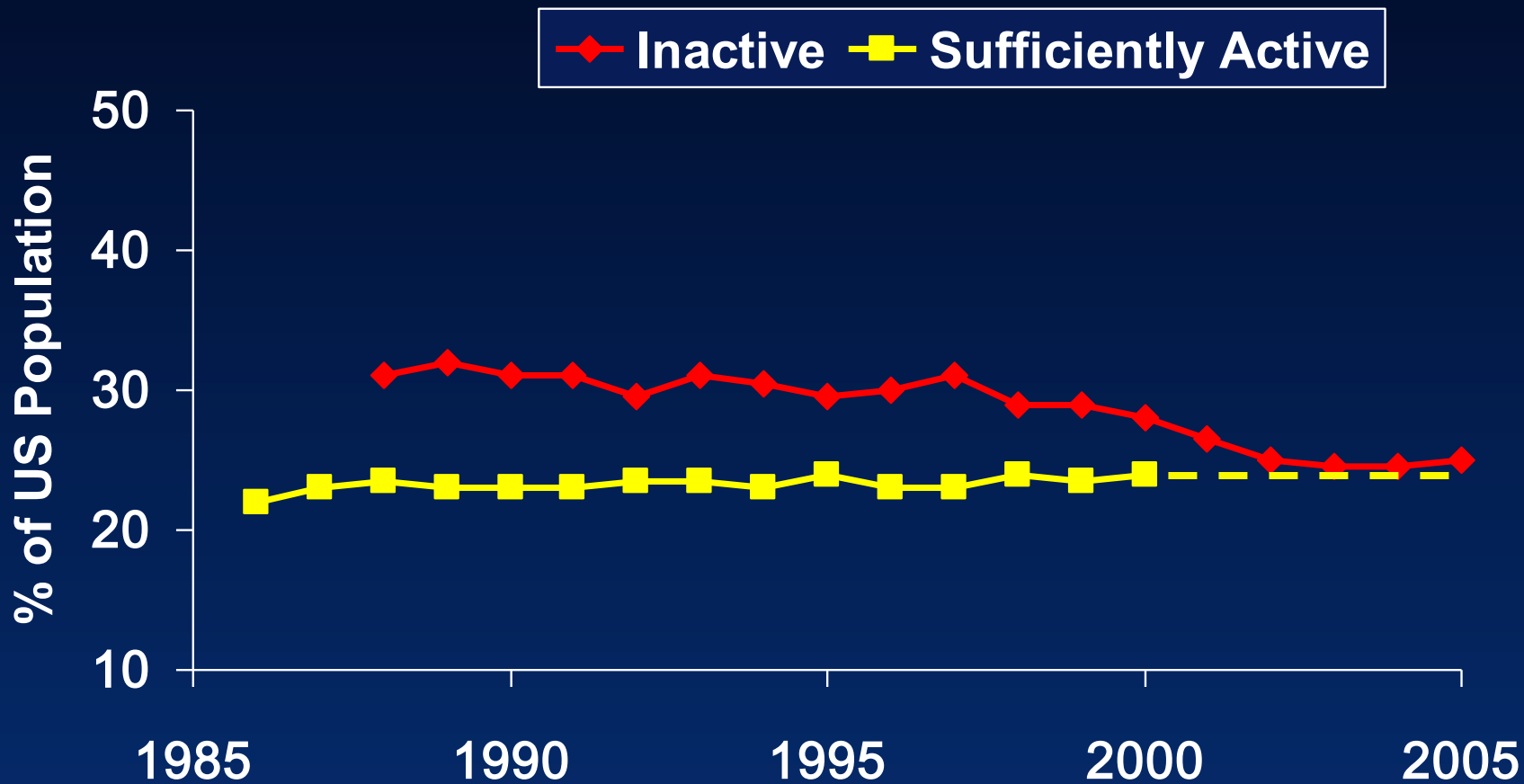
< **20** % of Americans actually meet these recommendations (thru LTPA).

**365,000** estimated annual deaths in America due to physical inactivity & poor nutrition. (2<sup>nd</sup> only to tobacco.)



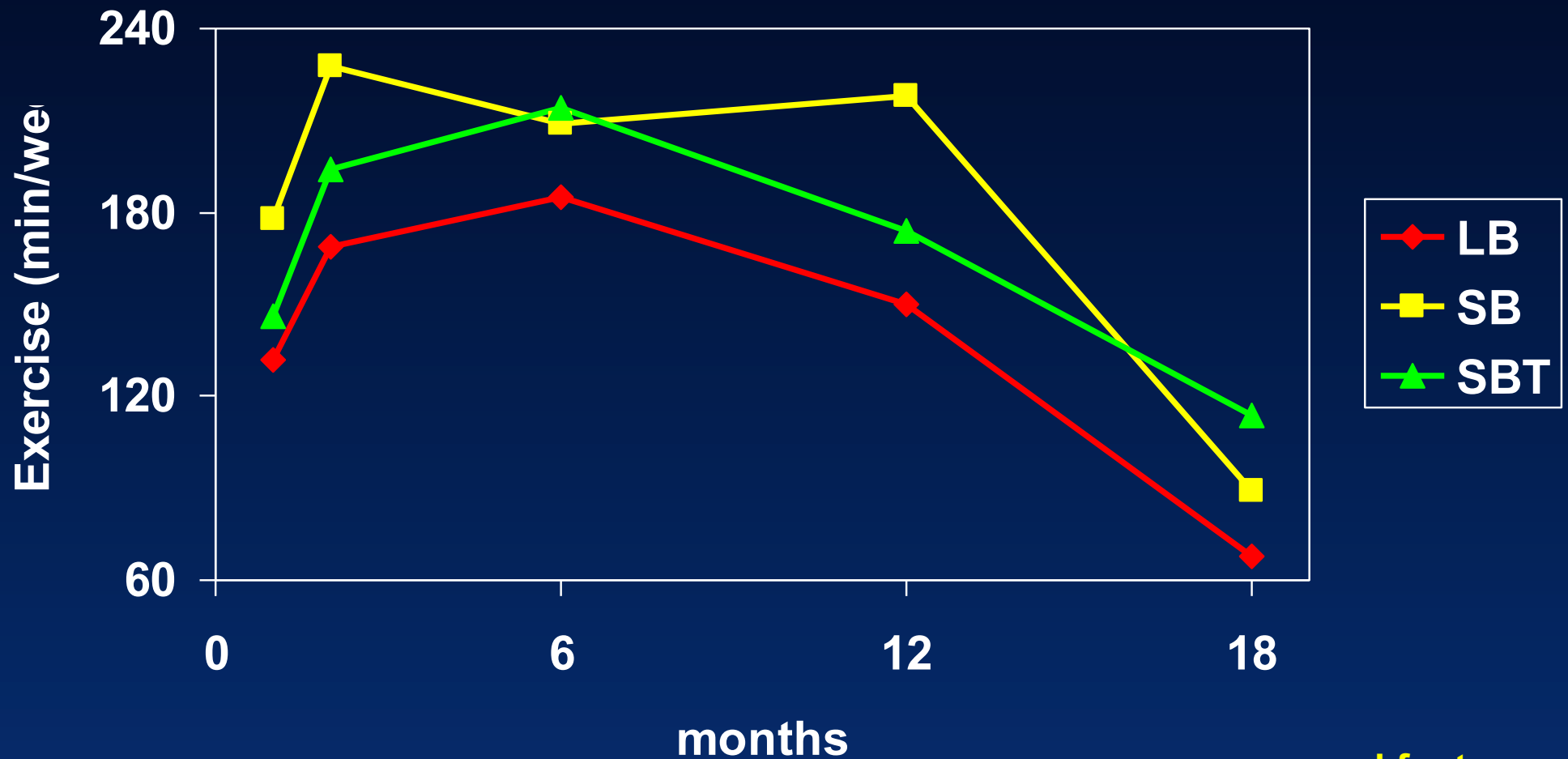
# Leisure Time Physical Activity in the US

(MMWR: 50(09), 166-9; 54(39), 991-4)



# Exercise Participation

Effect of Short Bouts, Home Treadmills  
(Jakicic et.al., *J. Amer. Med. Assoc.*, 282, 16)



# Social Ecology Model

Sallis & Owen,  
*Physical Activity & Behavioral Medicine.*

Determinants  
of behavior  
change

**Individual**  
motivation, skills

**Interpersonal** - family,  
friends, colleagues

**Institutional** - school, work,  
health care & service providers

**Community** - networks, facilities

**Public Policy** - laws, ordinances,  
permitting practices & procedures

# Socio-ecological successes?

**Tobacco use**



**Seatbelts, child safety restraints**



**Water-borne disease**

**(Haiti)**



**Recycling**



**Necessary and  
useful, but not  
enough. >**



**< We must build  
communities  
where people are  
*intrinsically*  
more active.**



**If we build it, will  
they come?**

# Yes! Four elements . . .

1. Varied destinations within walk, bike, & transit distance.
2. Connections: Trails, sidewalks, bike lanes, transit network.
3. Inviting site designs for peds, bikes, & transit.
4. Safe & accessible, all ages, abilities, incomes.



# 1. Land use.

Live, work, shop, play, learn, pray.



E.g. post office, grocery, schools

Compact neighborhoods & shared open space.

Mixed use.



Housing above, retail below.





## 2. Network of facilities:



- Presence of sidewalks, bike lanes, pathways.
- Shorter blocks, few cul-de-sacs, more links.
- Access to affordable, reliable, frequent *transit*.



# Bicycle network tools:



Sharrows



Bike lane



American River Tr.



Protected bike lane

### 3. Site Design:



**Which setting is more inviting & functional for travel on foot & by bicycle?**

# Site design? Research & practice suggest:



- Buildings near the sidewalk, not set back; parking on street or behind.
- Trees, benches, lighting, awnings, “human” scale.
- Details: bike parking, open space, plants, art, materials.



## Possible incentives:

- Decrease, share parking (include bike racks).
- Build-to lines.
- Mixed-use, multi-story; residential density bonus!
- Expedite permits.



Neenah WI



Appleton WI

**Elected, appointed officials & staff must be supported if expected to act courageously!**

## 4. Safety & access.

- Engineering can markedly improve safety.
- Increasing pedestrian and bike trips *decreases* overall accident & fatality rates.



Median islands



Roundabouts



Curb extensions

(Jacobsen P, *Injury Prevention*, 2003; 9:205-209.)

[www.markfenton.com](http://www.markfenton.com)

## E.g. Lane re-alignments

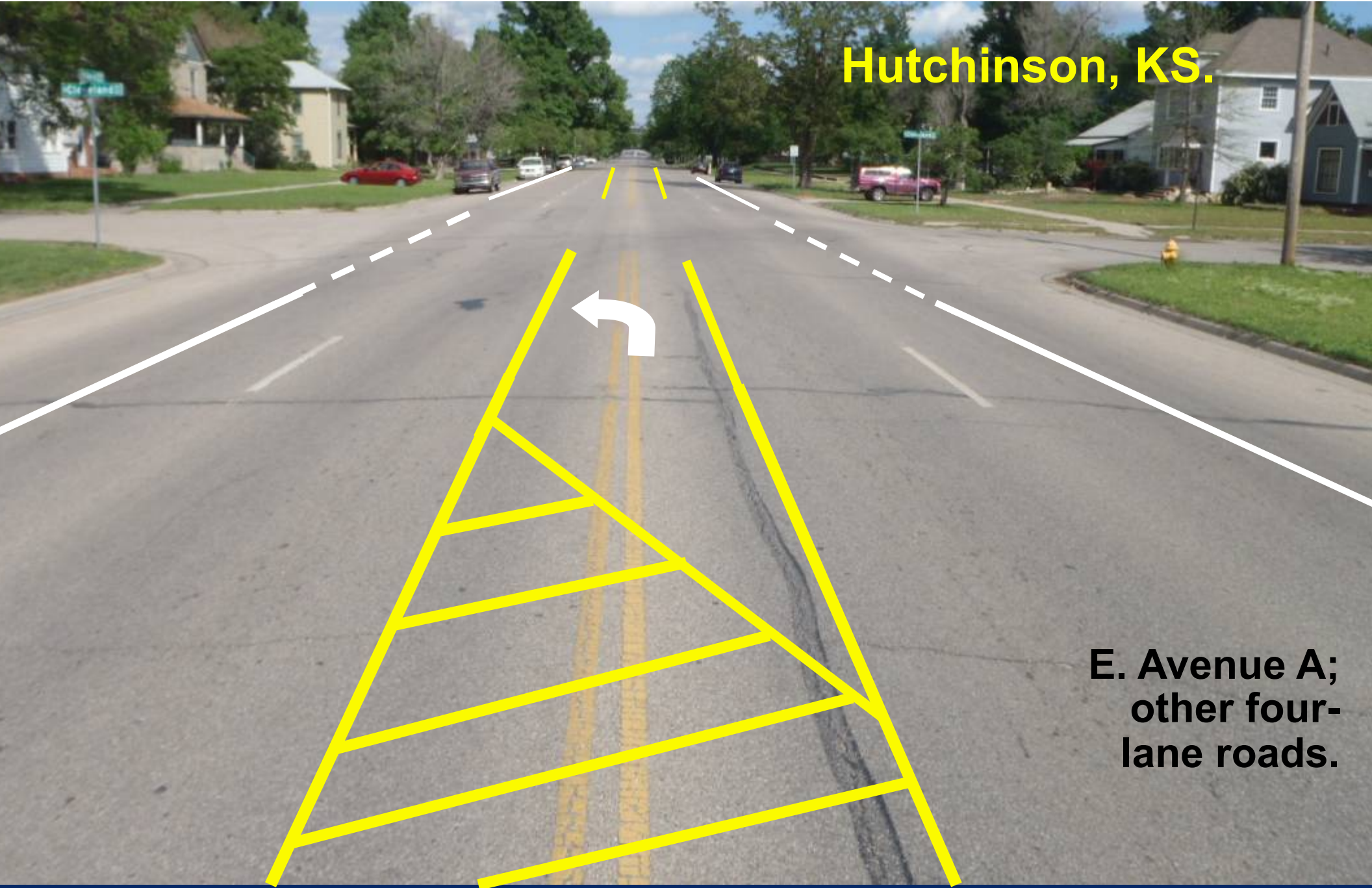
- 5 or 4 lanes reduced to 3, “road diets.”

- Reduces collisions & severity.
- Improves performance for pedestrians, bikes.



Urbana, IL; before & after.

Hutchinson, KS.



**E. Avenue A;  
other four-  
lane roads.**





**E. Avenue A, Hutchinson, KS – they did it!**

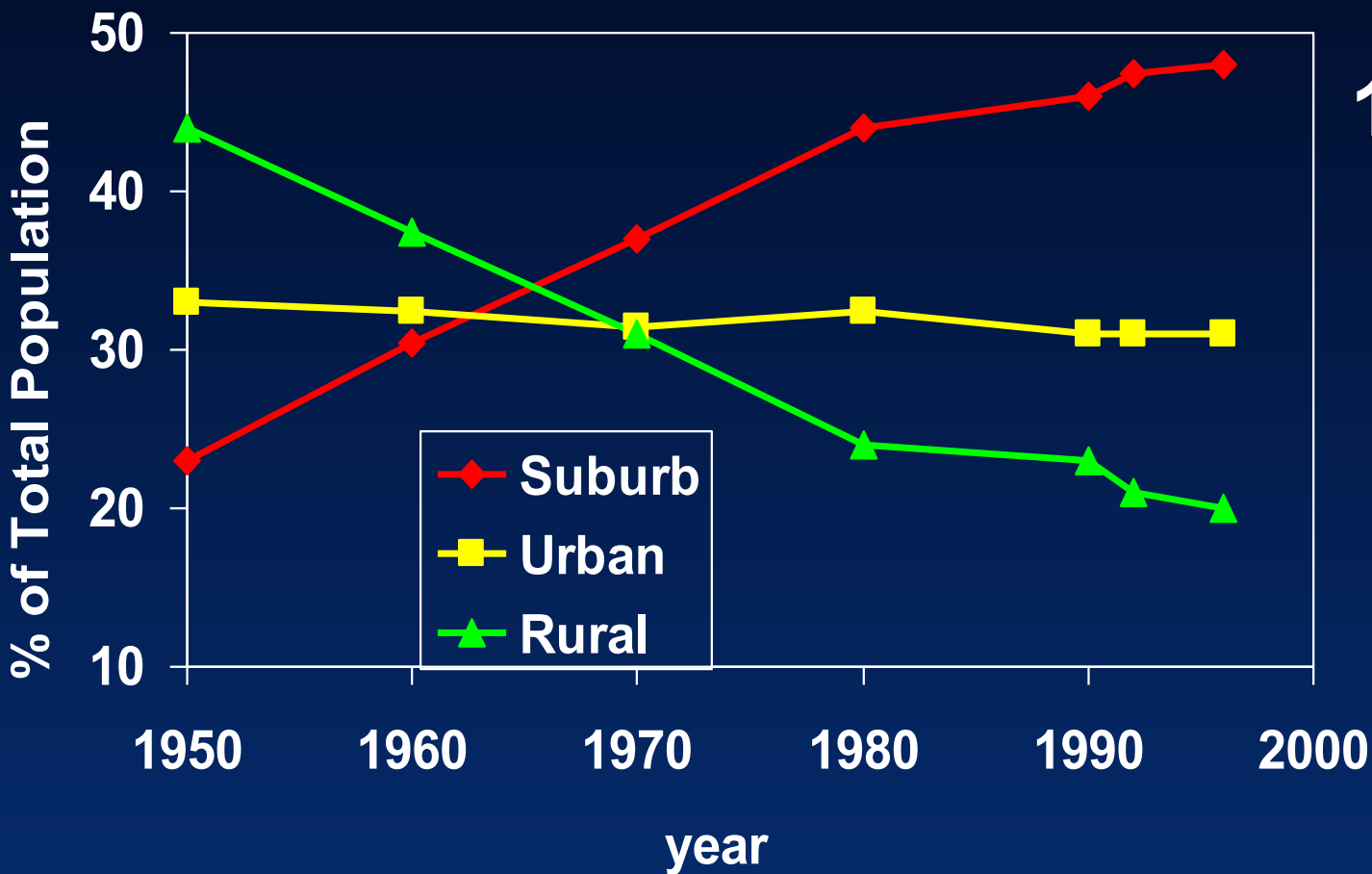
[www.markfenton.com](http://www.markfenton.com)

# “But what about rural areas . . . ?”

## Suburbanization of America

### US population shift, 1950-1996

(after *Bowling Alone*, R. Putnam, 2000)



1. Suburbia is steadily consuming the landscape . . .

2. Rural areas are  
where we can  
affect the shape of  
development  
*before it's done!*



# Four Elements of Healthy Community Design:



Safety & access



[www.activelivingresearch.org](http://www.activelivingresearch.org)

[www.markfenton.com](http://www.markfenton.com)

**Shouldn't the free market  
dictate how we build our  
cities & towns?**

**Economics. *Walking the Walk:*  
*How Walkability Raises Housing Values*  
*in U.S. Cities.* (CEOs for Cities report)\***



walkscore = 22



walkscore = 68

**Higher score = ↑ \$4,000-\$34,000 home value**

**\*[www.ceosforcities.org/work/walkingthewalk](http://www.ceosforcities.org/work/walkingthewalk)  
[www.walkscore.com](http://www.walkscore.com)**

[www.markfenton.com](http://www.markfenton.com)

# ***On Common Ground*** Nat'l Assoc. of Realtors; Summer 2010, [www.realtor.org](http://www.realtor.org)

## **The Next Generation of Home Buyers:**

- **Taste for in-town living.**
- **Appetite for public transportation.**
- **Strong green streak.**
- **Plus, Americans are driving less overall!**




# Smart Growth & Economic Success

[www.epa.gov/smartgrowth/economic\\_success.htm](http://www.epa.gov/smartgrowth/economic_success.htm)

Dec. 2012, Nov 2013

EPA United States Environmental Protection Agency

December 2012  
[www.epa.gov/smartgrowth](http://www.epa.gov/smartgrowth)




SMART GROWTH AND ECONOMIC SUCCESS:  
BENEFITS FOR REAL ESTATE DEVELOPERS, INVESTORS,  
BUSINESSES, AND LOCAL GOVERNMENTS

Office of Sustainable Communities  
Smart Growth Program

EPA United States Environmental Protection Agency

November 2013  
[www.epa.gov/smartgrowth](http://www.epa.gov/smartgrowth)



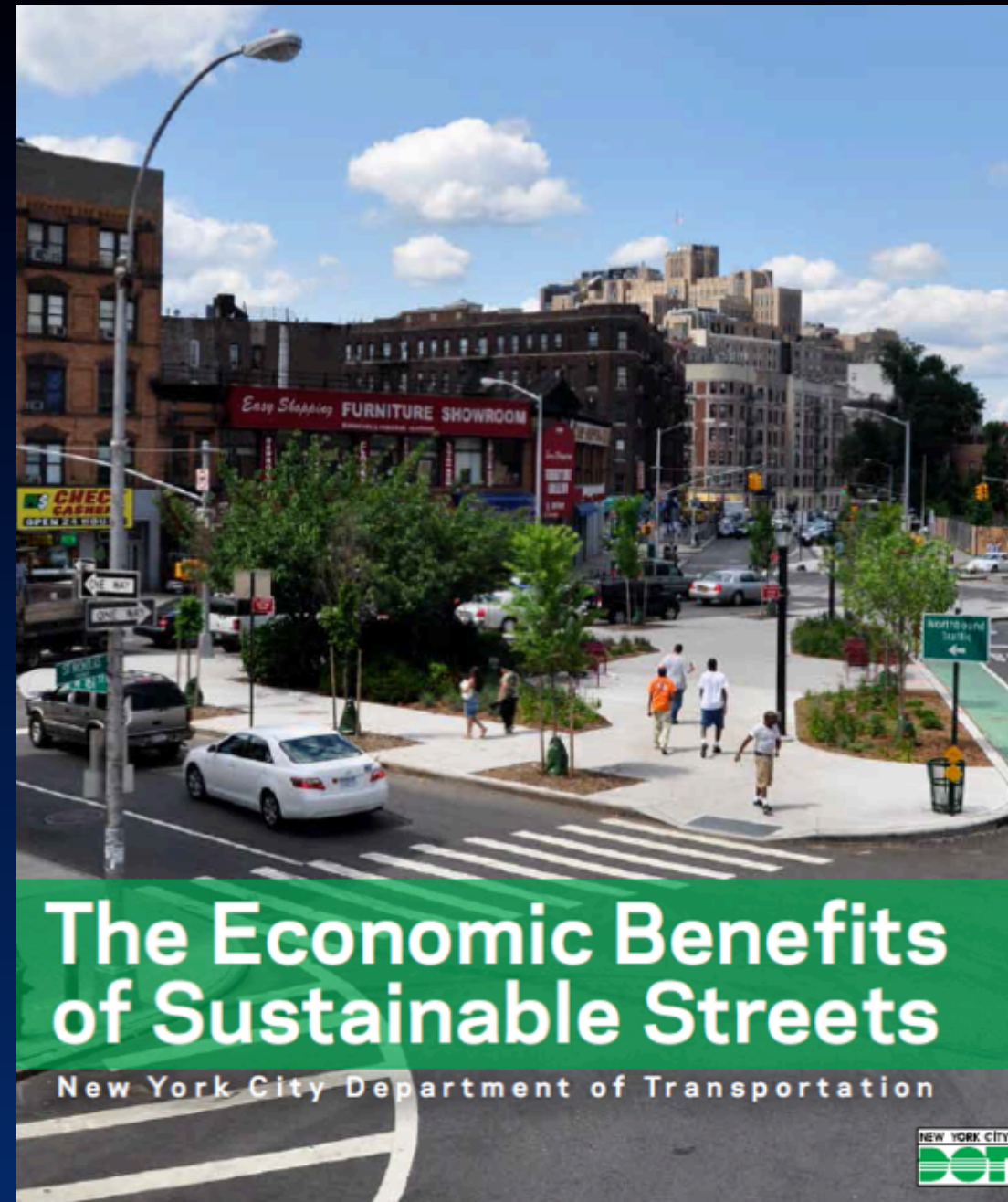
SMART GROWTH AND ECONOMIC SUCCESS:  
THE BUSINESS CASE

Office of Sustainable Communities  
Smart Growth Program



# Study of street redesigns in NYC:

- Pre- and post-project measurement of retail revenue.
- E.g. pedestrian plazas, bike paths, redesigned intersections, BRT . . .
- Improvement areas *exceeded* borough & control area averages.



# PROTECTED BIKE LANES MEAN BUSINESS



## Benefits of protected bike facilities

[BikeWalkAlliance.org](http://BikeWalkAlliance.org)  
[GreenLaneProject.org](http://GreenLaneProject.org)

- Support real estate values.
- Recruiting & retaining skilled employees.
- Healthier, more productive workers.
- Increased retail revenue.

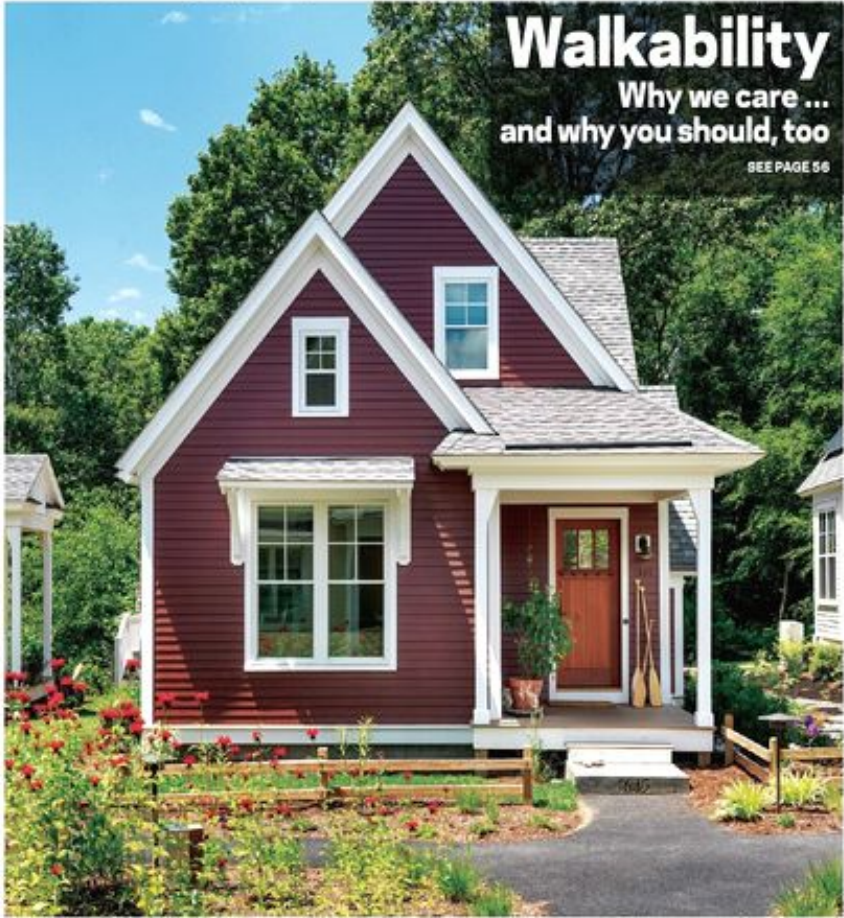
SMART BUILDING STARTS HERE

THE MAGAZINE  
OF THE NATIONAL ASSOCIATION  
OF HOME BUILDERS

# Builder

**Walkability**  
Why we care ...  
and why you should, too

SEE PAGE 56



MARCH 2014 WWW.BUILDERONLINE.COM

## Walkability. Why we care & why you should too!

Builder Magazine,  
Mar. 2014

- Consumer desire
- Flexibility in design
- Lower development costs . . .

## What's happening?

- 1<sup>st</sup> & 2<sup>nd</sup> generation malls & big box stores are struggling.



Employers seek livable communities, where employee satisfaction, health, productivity, & retention are high.

# Houghton MI gets it; note photos highlighted on city web site. These . . .



**Not this . . .**



# So how to get there?



**Walk audits**



**Implementation**



**Work sessions**

## Three recommendations:

- **Speak up:** To family & friends, students, colleagues, the media, especially community leaders.
- **Act up:** Help improve the built & policy environments for P.A.
- **Step up:** Be a role model—build lifestyle activity into your day!



# Build a compact, interdisciplinary team . . .

- Education, schools
- Planning & Zoning
- Engineering, DPW
- Parks, Recreation
- Public Health & Safety
- Historical preservation
- Social justice & equity
- Chamber of Commerce
- Developers, Lenders, Realtors
- Neighborhood Assoc., Church & Service Groups
- Environment, Conservation . . .

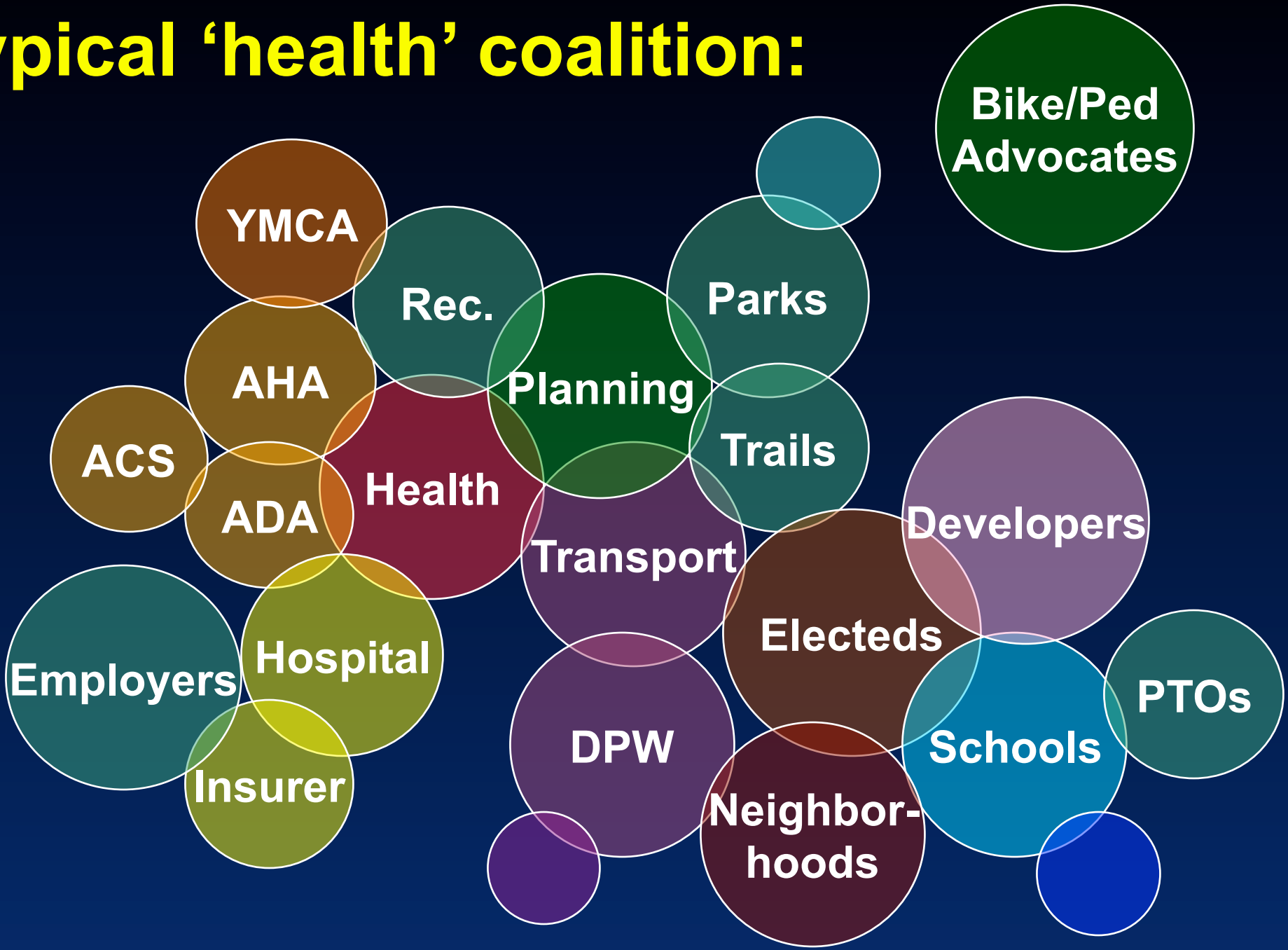


**Policy information:**

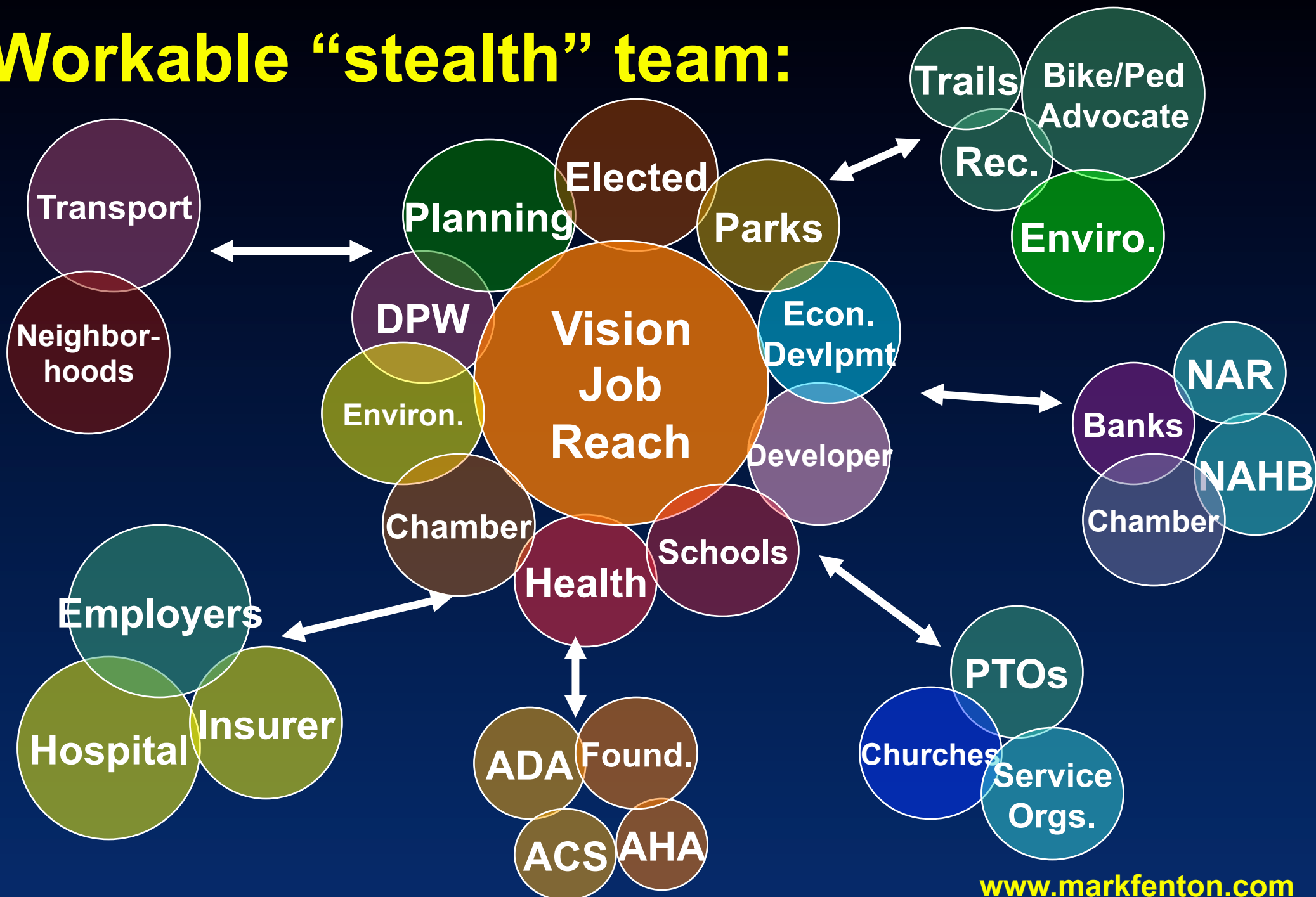
[www.lgc.org](http://www.lgc.org)

[www.vtppi.org](http://www.vtppi.org)

# Typical 'health' coalition:



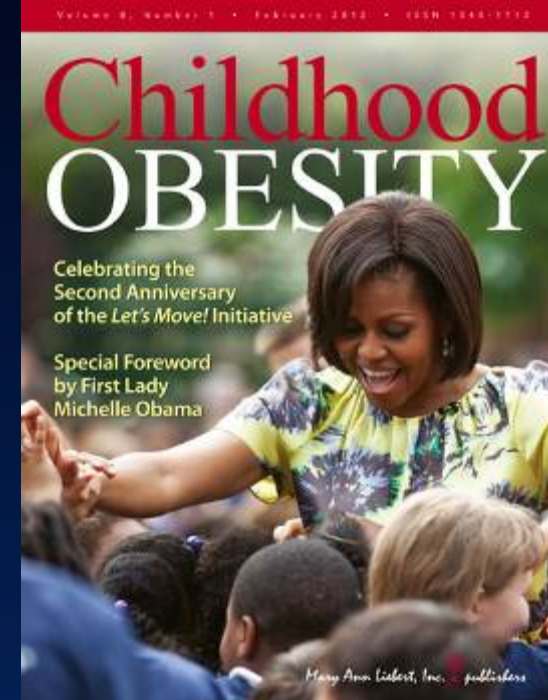
# Workable "stealth" team:



# Act up: Thoughts on five national movements changing the landscape.

(Fenton, Community Design & Policies for Free Range Children, *Childhood Obesity* 8(1), Feb 2012)

1. Healthy planning & zoning.
2. Complete Streets.
3. Transportation trail networks.
4. Transit- & bicycle-friendly policies.
5. Comprehensive Safe Routes to School.



# 1. Change the rules: Zoning ordinance & subdivision regs.

- No more big box & strip malls—build villages!
- Neighborhood corner stores (w/ healthy choices) & pocket parks.
- Protect farmland, open space; **stop rezoning!**
- Keep schools close to where kids live!



# E.g. best practices in development



- **Narrow streets, sidewalks both sides, links to trail system (existing & planned).**
- **Compact design, shared open space.**
- **Mix housing types, sizes (& incomes).**

# On all development & redevelopment . . .

- Require **Multi-modal Transportation Analysis** instead of Traffic Impact Analysis (**MMTA** vs TIA).
- Maximize **active** trip generation.



- Bus pull-out, transit shelter.
- Bike lane, sharrows, parking.
- Sidewalk link, trees, benches.



Oak Park, IL

## 2. Help build & maintain Complete Streets

- **Complete Streets:** Pedestrians, bicyclists, transit riders, & drivers of all ages & abilities considered in every road project (new, repair, maintenance).





# Low cost options & pilot or demonstration projects.



St. Louis



Queens NY



Billings

Walkyourcity.org



Montpelier



**Wayfinding, street furnishings, parklets.**

# Anaconda, MT “pop-up” curb extension.



But can the  
biggest truck  
make the turn?

# Planners, engineers job descriptions.

3 key words:

- Health
- Safety
- Welfare



Performance  
measures?

- Minimize trips
- Minimize vehicle miles traveled (VMT)
- Maximize ped, bike, & transit trips
- Assess HEAT

# **Institutionalize Complete Streets in funding!**

## **E.g. Nashville, TN (MPO)**

- **Transportation Improvement Program scoring (60%) considers impacts to pedestrian, bicycle, transit, goods & services; not just cars!**



- **Higher funding priority for those with multi-modal benefits.**
- **LOS-only projects don't get funded!**

# H.E.A.T. for Bicycling and Walking (WHO)

Estimate/meas.  
# ped/bike trips

Avg. trip length

H.E.A.T.

Statistical \$  
value of life-  
years saved.

Other defaults adjustable:

- mortality rate
- years to full impact
- discount rate . . .

[www.heatwalkingcycling.org](http://www.heatwalkingcycling.org)

[www.markfenton.com](http://www.markfenton.com)

# E.g. Mass. Bay Transit Authority (MBTA) 2012 budget crunch:

- Proposed fare increases, service reductions.
- Metropolitan Area Planning Council did a Health Impact Analysis.
- Included HEAT calculation.





[www.mapc.org/sites/default/files/MAPC\\_HIA\\_Summary\\_FINAL.pdf](http://www.mapc.org/sites/default/files/MAPC_HIA_Summary_FINAL.pdf)


# A Healthy **T** for a Healthy Region:

A Health Impact Assessment of Proposed MBTA Service Cuts and Fare Increases

Proposed changes to MBTA fares and services would carry significant human and financial costs, resulting in avoidable loss of life and hundreds of millions of dollars per year in lost time, wasted fuel, and preventable hospitalizations and accidents. Fare increases and service cuts to the MBTA system would result in costs that far exceed the budget shortfall the proposed changes seek to address:

PROJECTED 2012 MBTA DEFECIT: **\$161 MILLION**  
YEARLY HEALTH COST: **\$272.1 MILLION / \$386.9 MILLION**

  COST OF ADDITIONAL TIME IN TRAFFIC  
**\$137.5 MILLION**  
**\$186.0 MILLION**

 COST OF ADDITIONAL MORTALITY AND HOSPITALIZATIONS DUE TO AIR POLLUTION\*  
**\$1.5 MILLION**  
**\$2.1 MILLION**


 COST OF ADDITIONAL FUEL BURNED  
**\$22.7 MILLION**  
**\$31.8 MILLION**


PROPOSED FARE INCREASE AND SERVICE REDUCTION SCENARIOS:

SCENARIO ONE  
FARES WOULD INCREASE BY 43% AND SERVICE REDUCTIONS WOULD AFFECT BETWEEN 38-48 MILLION TRIPS PER YEAR

SCENARIO TWO  
FARES WOULD INCREASE BY 35% AND SERVICE REDUCTIONS WOULD AFFECT BETWEEN 53-64 MILLION TRIPS PER YEAR

  COST OF LIVES LOST DUE TO DECREASED PHYSICAL ACTIVITY  
**\$74.9 MILLION**  
**\$116.5 MILLION**

 COST OF ADDITIONAL CAR CRASHES, INCLUDING CRASHES WITH BICYCLES AND PEDESTRIANS  
**\$33.6 MILLION**  
**\$48.8 MILLION**

 COST OF CARBON EMISSIONS  
**\$1.9 MILLION**  
**\$1.7 MILLION**

2<sup>nd</sup> largest, after “time in traffic!”



\*FOR ASTHMA, CHRONIC LUNG DISEASE, HEART ATTACKS, HEART DISEASE, AND MAJOR CARDIOVASCULAR EVENTS



### 3. Support a comprehensive network of *transportation* trails.

- **Connect** to other parts of network (sidewalks, bike lanes, transit).
- Focus on **destinations** (schools, shopping, parks, senior housing)
- Plan for & **fund maintenance!**



Cornell Elem.



Rapid Creek Tr.,  
Rapid City SD

## 4. TDM: Bike-friendly communities . . . .

- **Bike Friendly Community, Business, or Campus** rating (bronze to platinum).
- Community “buy a bike rack” program.
- Teach bike skills, safety, repair in your school. **v**



No. Adams, MA



Blue Island, IL.

[www.bikeleague.org](http://www.bikeleague.org)

[www.markfenton.com](http://www.markfenton.com)

## Rethinking Parking: \*

- Invest in transit, bike & car share, mixed-use first.
- Adopt **market based** pricing strategies (\$15-\$20K/space/yr)
- Reinvest the \$ locally.
- Maximums not minimums.
- Shared parking.

\* May 2006 & 2008, *Planning magazine* (Donald Shoup)



West Chester, PA



Wichita, KS

## 5. Safe Routes to School only if Admin on board:

- **Program** walking school busses, bicycle trains, safety **education**.
- **Project:** remote drop-off area in adjacent park.
- **Policy:** Relocate bus/car drop-off/pick-up to park; **5 min. car safety delay** to let ped, bike, bus riders clear.



[www.saferoutesinfo.com](http://www.saferoutesinfo.com)

[www.markfenton.com](http://www.markfenton.com)

# Step up: Be an active role model.



Leave the car behind at least one trip per week; walk, bike, or take transit instead. And take a child along.

# The two questions that are NOT the real problem:

- **Technical.** How do we do it? What are best practices?
- **Financial.** How do we pay for it? Where's the money?

Paint & bike rack

Urban  
NACTO Street  
Design  
Guide

nacto.org



[www.markfenton.com](http://www.markfenton.com)



[www.markfenton.com](http://www.markfenton.com)

**Olshansky et.al., “A  
Potential Decline in  
Life Expectancy . . .”  
*New Eng. J. of Med.*,  
March 17, 2005**



[www.markfenton.com](http://www.markfenton.com)