

Creating a Healthier Community with Stickiness

—

Healthy Concord

Concord, MA
May 2014



Enjoying a walkable
downtown. . .

Common challenges to “healthy design:”

- Isn't health a result of **personal decisions & habits**?
- If we build it, **will they come?** (People are naturally lazy . . .)
- Shouldn't the **free market** dictate how we build our cities & towns?
- So, what is your **prescription** for healthy design? Could we actually do it here?



Sauntering on a Concord sidewalk.



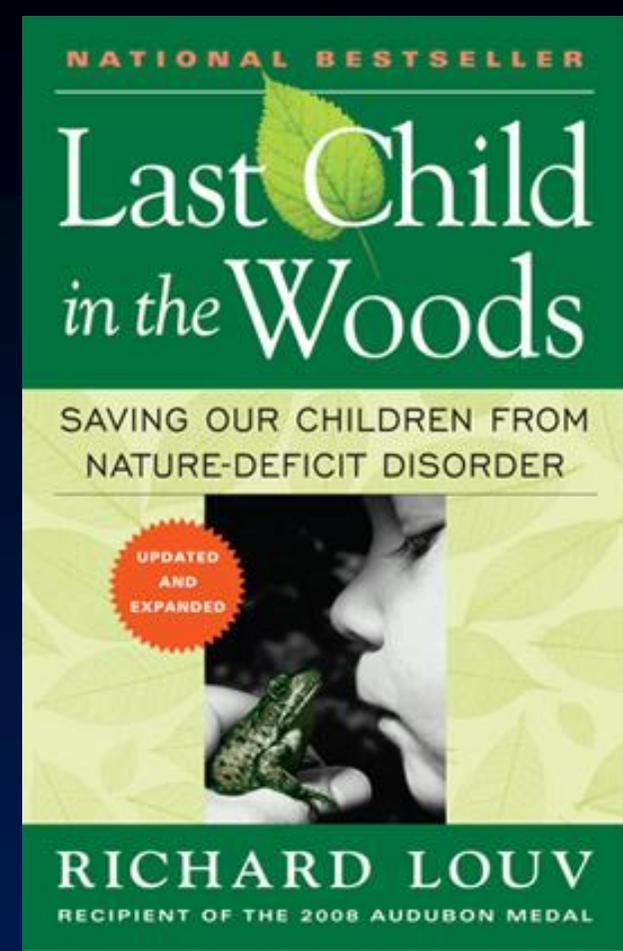
Youthful recollections





30-Nov-2009

Not just my idea . . .



Kids held back with 'over-organised' play, says Shane Gould

Pia Akerman

OLYMPIC golden girl Shane Gould has blasted children's sports programs as "over-organised" and holding back the natural development of physical skills, contributing to physical and mental problems down the track.



Gould

— 5, 6, 7, 8 — that is really too young for kids to be involved in organised sport, even though it is modified," she said at the Australian Institute of Sport.

coined the term "nature deficit disorder" — it's not actually a true disorder, but we are going to start to see problems in children like concentration, hand stability to regulate their emotions." Currently working on a masters degree in social geography at the University of Tasmania, Gould will publish her thoughts on children's physical activity in the December issue of the Child

ren's ability to play naturally. "Public liability seems to be the main focus for the design of our children's playgrounds and all of us need to take some responsibility for this," Gould writes. "The race to blame someone for a child's fall from a piece of playground equipment has had the appalling knock-on effect of almost eliminating child's play

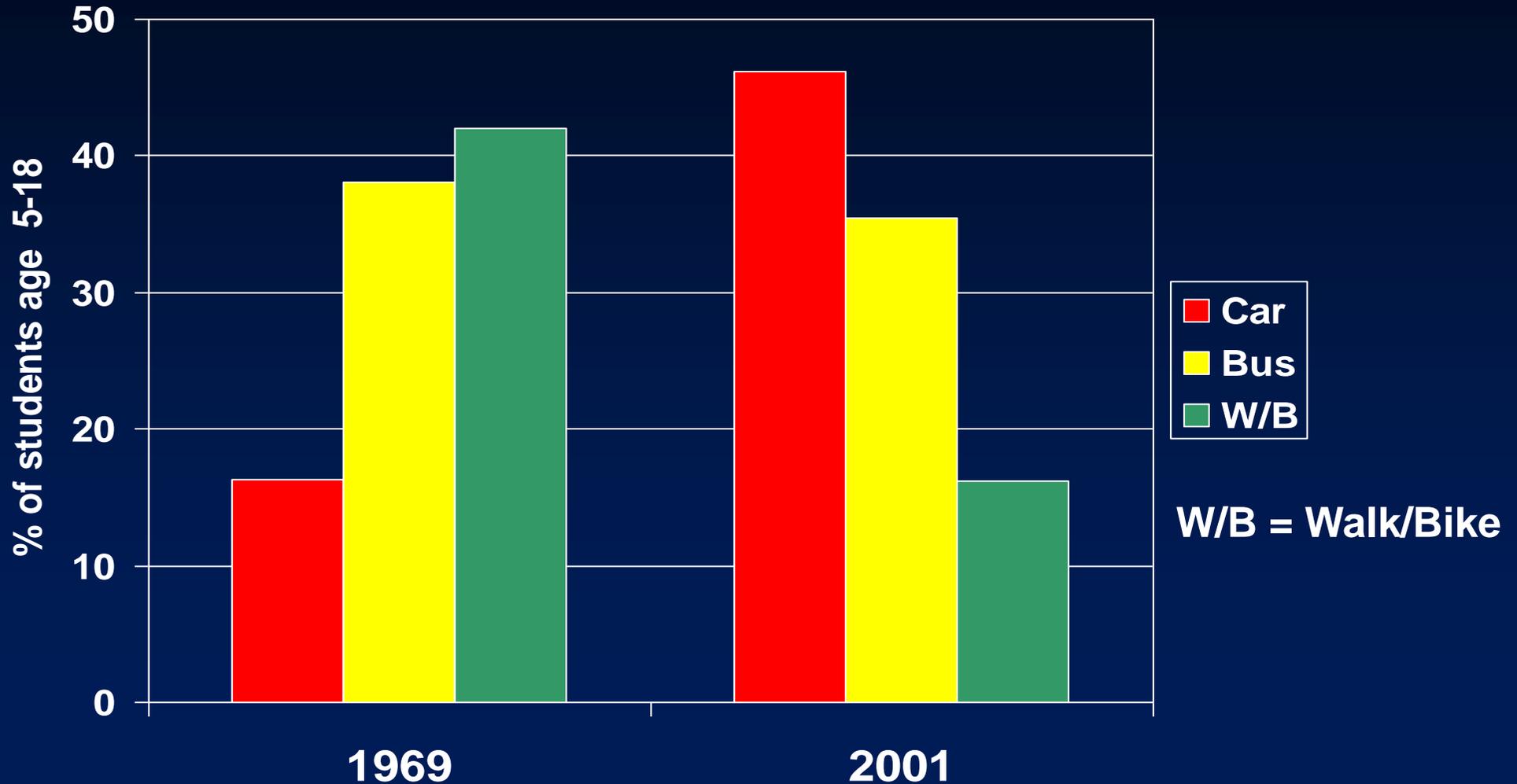
Gould said home-improvement TV shows emphasising aesthetically pleasing courtyards had encouraged people to ditch traditional backyards. "Kids need backyards — they need to dig dirt and get up plants and see the roots. They need to find worms and beetles and make tracks and build cubbies and pull them down again," she said. A mother of four, Gould tried

Howan government's focus on after-school sports to address childhood obesity was "well-meaning" but failed to attract most children who often had a "can't do" attitude to sports. "Children, particularly under eight, do not, in my opinion, need to be involved in organised sports," she writes. Gould said children today were clumsy due to "lack of movement experiences" such as reaching

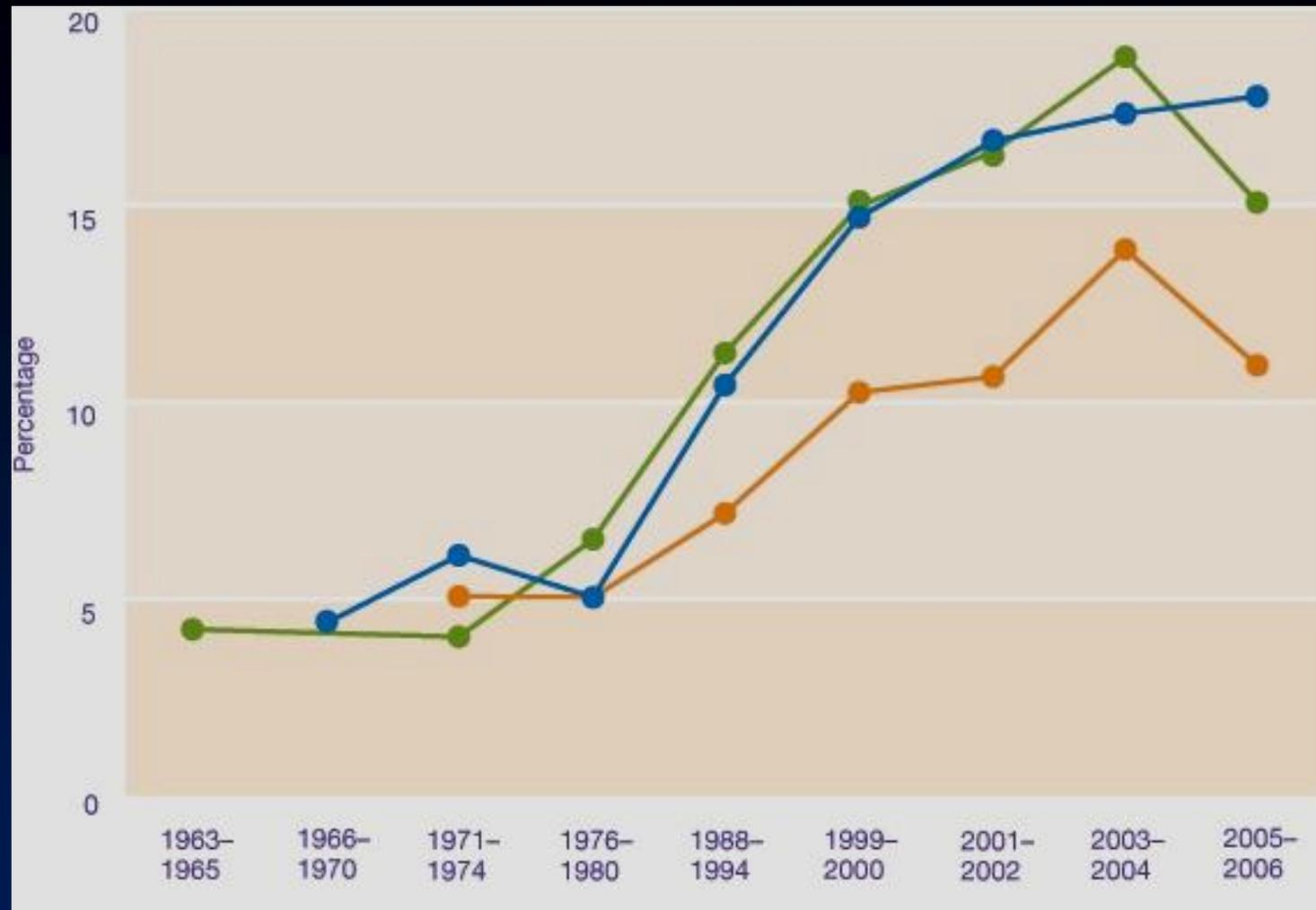
The Australian, 14-Oct-2009

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



CDC, National Center for Health Statistics.

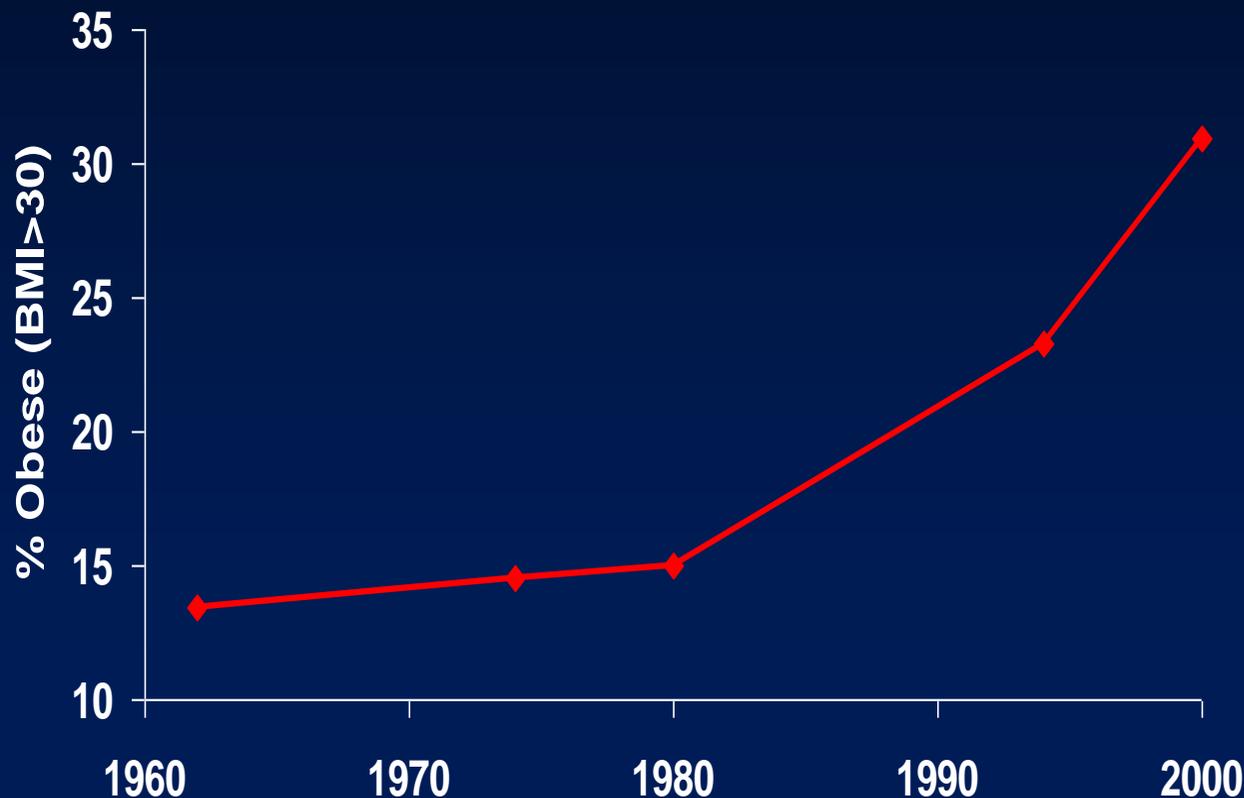
National Health Examination & Nutrition Surveys (NHANES).

www.rwjf.org/files/publications/annual/2008/year-in-review/

America's looming chronic disease apocalypse . . .

US "Obesity Epidemic"

Ogden et. al. (JAMA 288, 14; Oct. 2002)



Step one:

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** mins. for youth).

< **20** % of American adults actually meet these recommendation (thru LTPA).

365,000 Estimated annual deaths in America due to physical inactivity & poor nutrition. (2nd only to tobacco.)

Surgeon General's Report 1996 Physical Activity Guidelines 2008

www.health.gov/paguidelines

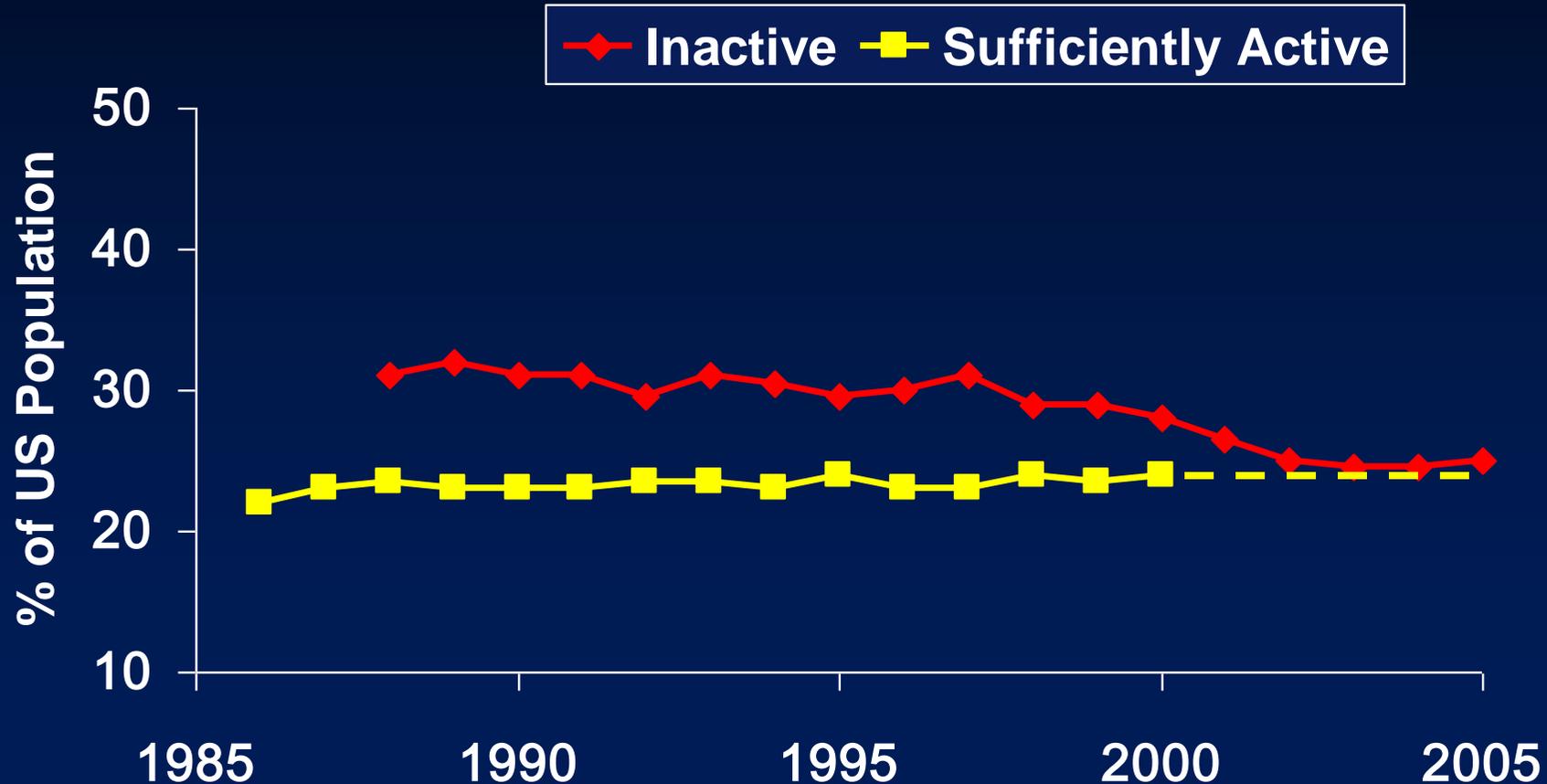
- **150 min/week** of moderate **physical activity**; more is better.
- Any activity is better than none.
- Can be **broken up**.
- **300 min/week** for children.
- Reduced risk for CVD, diabetes, osteoporosis, obesity, dementia in old age, clinical depression, a growing list of cancers . . .



This counts!

Leisure Time Physical Activity in the US

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

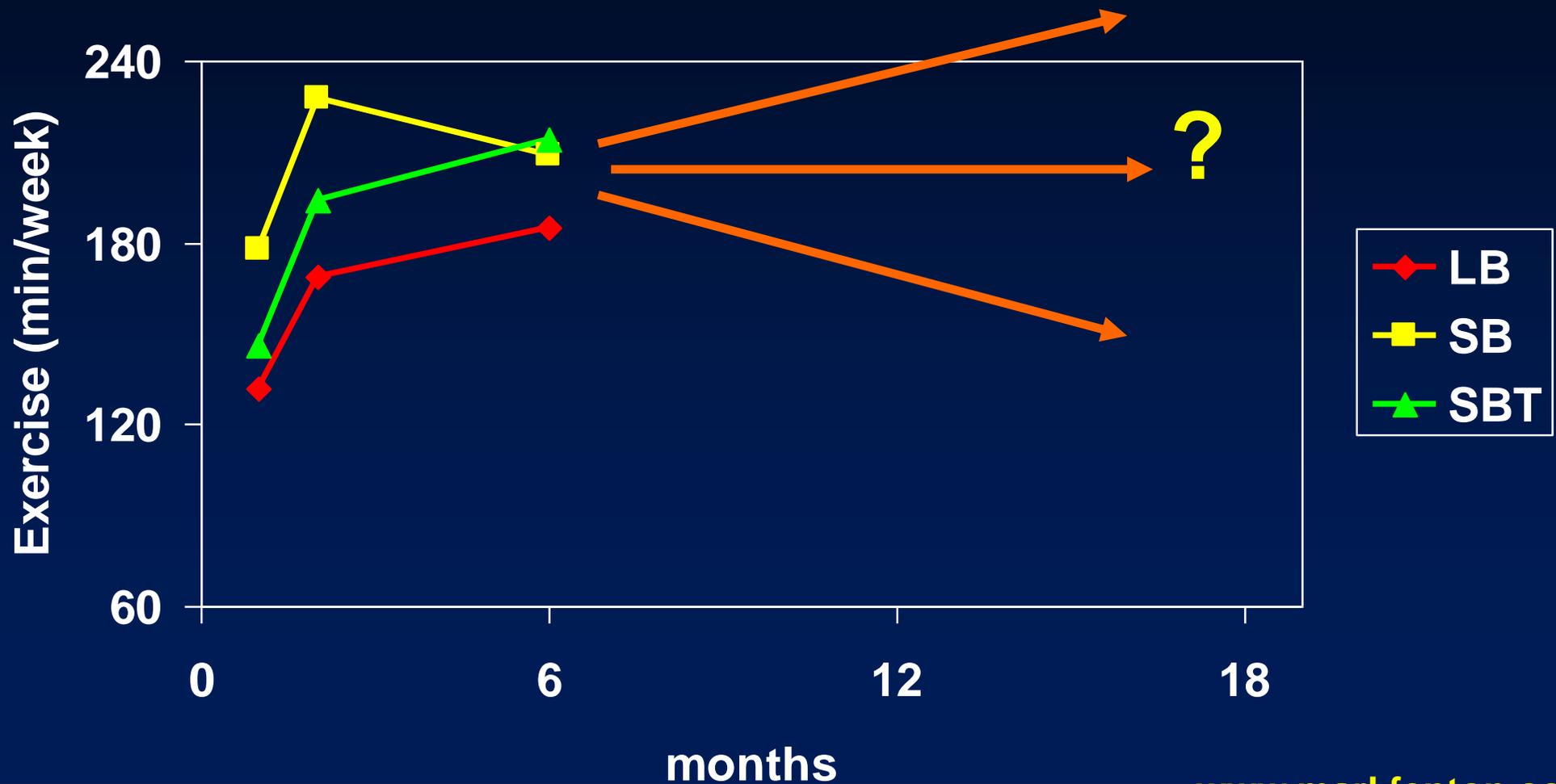


**Why is it so resistant
to change?**

**I believe in large part the
stickiness problem!**

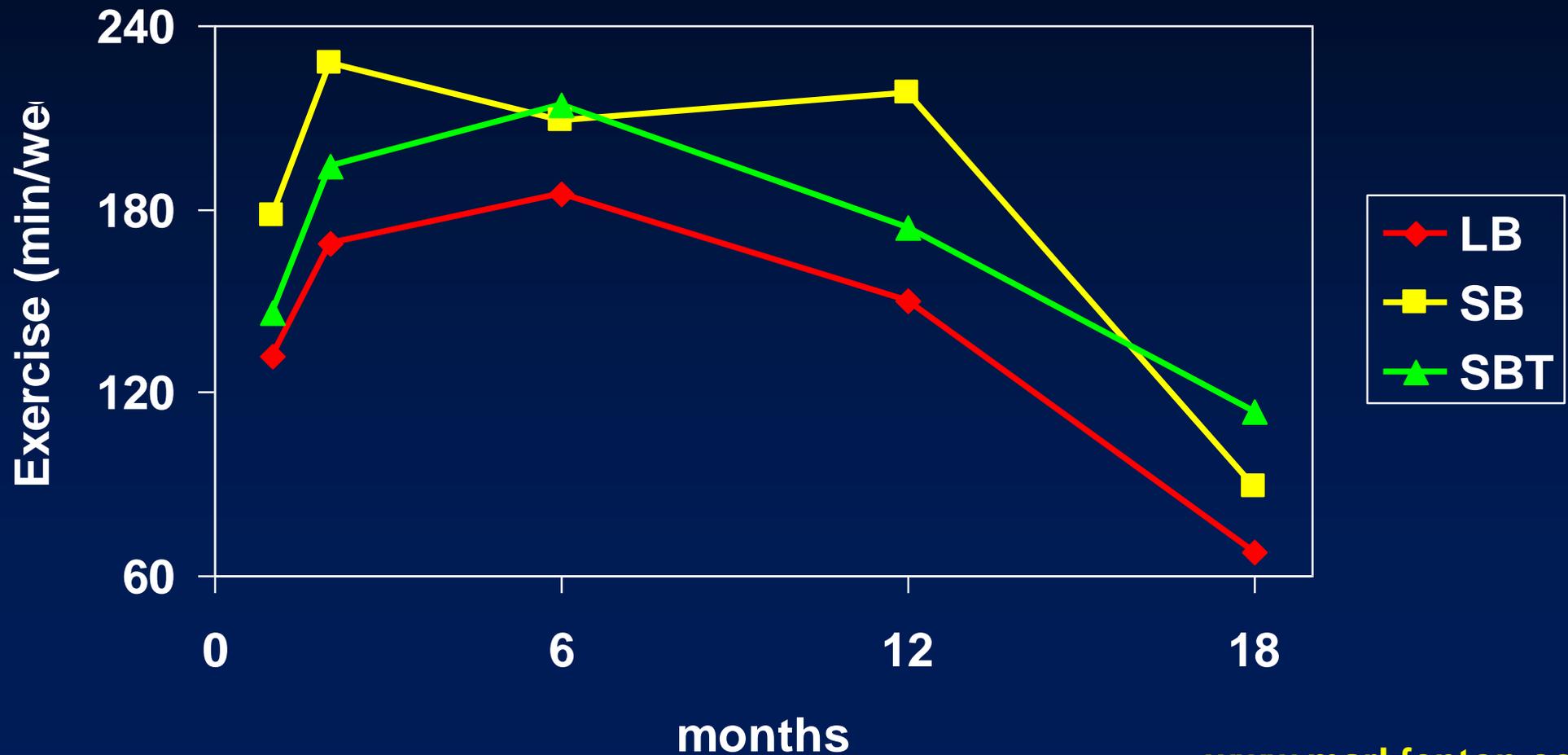
Exercise Participation

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



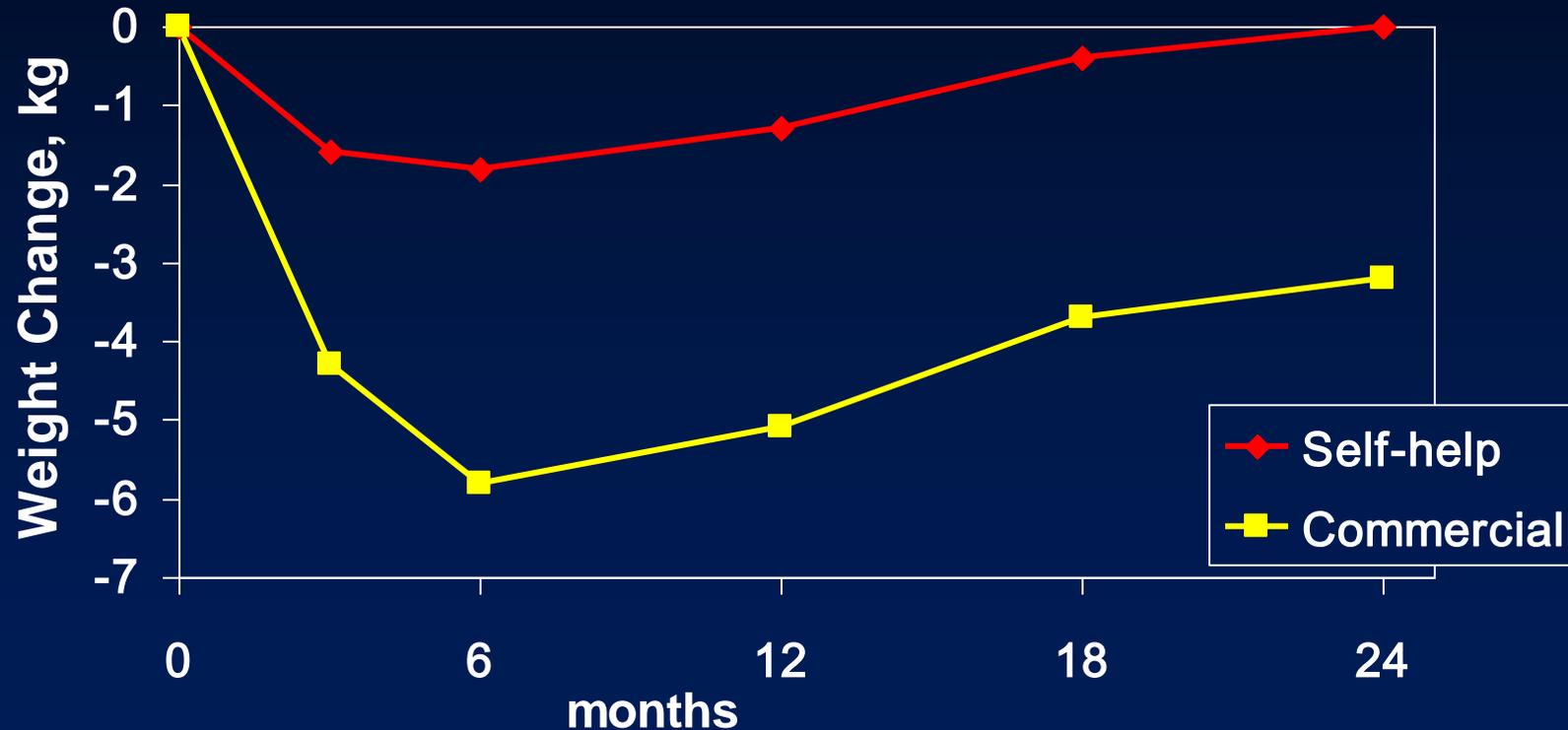
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Self-help vs. Commercial Weight Loss Programs

(Heshka et.al., *J. Amer. Med. Assoc.*, 289, 14; Apr. 2003)



A realization:

**Simply telling people to
“exercise” is not enough. We
need to support increases in
routine, daily physical
activity for everyone.**

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

**Easier to
Implement**

Individual
motivation, skills

**Greater
Impact**

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
is Prohibited on
Marlborough Hospital
Property

**Tobacco
use**

**Seatbelts,
child safety
restraints**



Water-borne disease

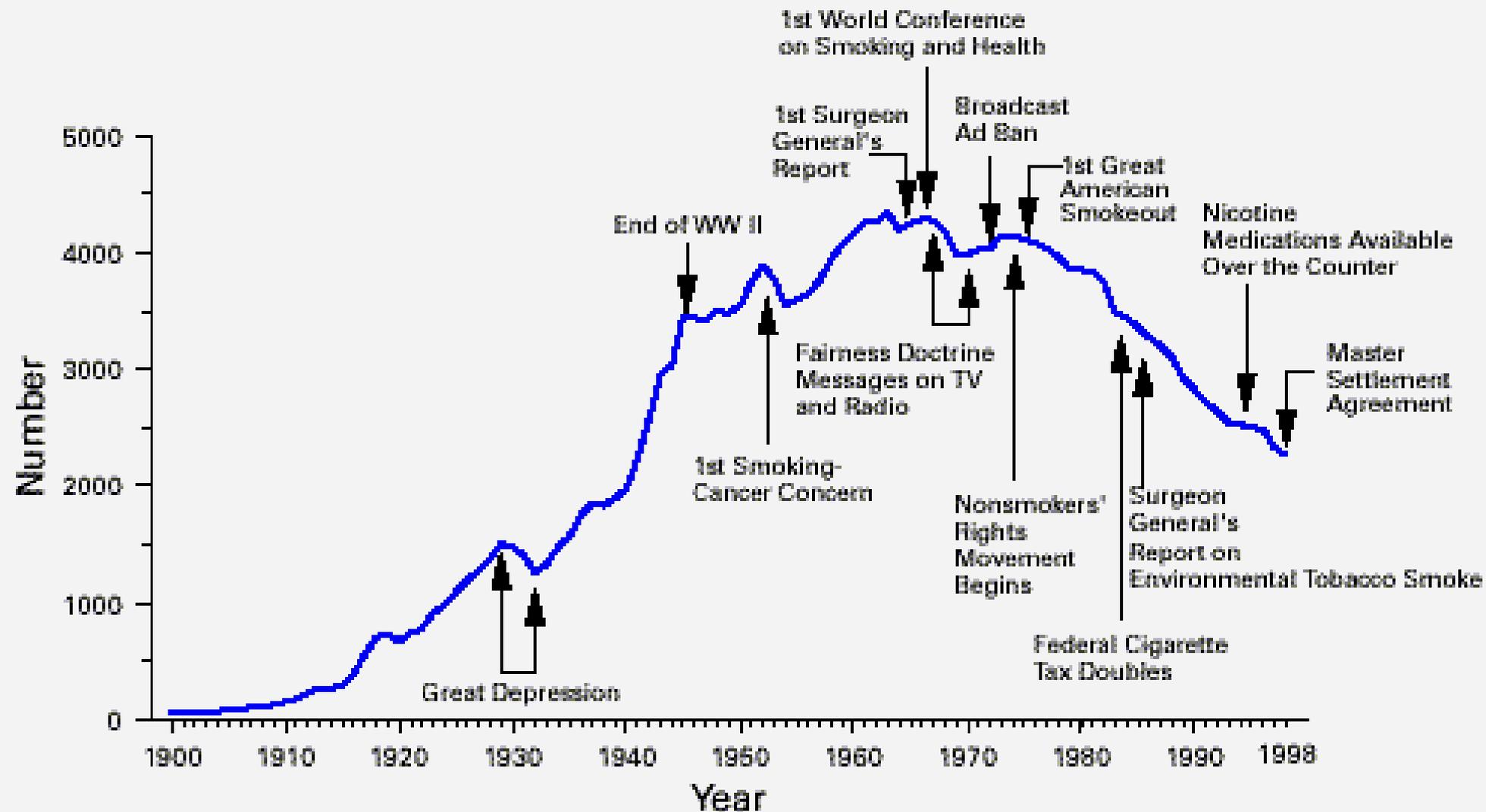
Haiti



Recycling



FIGURE 1. Annual adult per capita cigarette consumption and major smoking and health events — United States, 1900–1998



Sources: United States Department of Agriculture; 1986 Surgeon General's Report.

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



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

If we build it will they come?

**(Does the built environment
really matter?)**

YES! Four elements . . .

1. Variety of uses within walk, bike, & transit distance.
2. Network: sidewalks, trails, bike lanes, transit.
3. Site designs are functional & inviting for pedestrians, bicyclists, & transit users.
4. Safe & accessible for all ages, incomes, abilities



www.thecommunityguide.org

CDC Guide to Community Preventive Services

www.markfenton.com

1. Land use.

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



E.g. post office, grocery, schools . . .

Compact neighborhoods
& shared open space.

Housing
above,
retail
below.



2. Network is more complete with:



- Presence of sidewalks, bike lanes, pathways.
- Shorter blocks, cul-de-sac connectors, more intersections.
- Access to quality, affordable *transit*. >



Transit riders are physically active.

Besser, Dannenberg, *Amer. J. Prev. Med.*, 29 (4), Nov. 2005.

Just during the daily walk/bike to transit:

- Half of transit riders walk at least 19 mins.
- 29% get at least 30 mins. of activity.
- Minorities, poor (income <\$15k/yr.), denser urban dwellers more likely to get 30+ mins./day.



Bicycle network options:



Shar-row
(shared
use arrow)



Bicycle
lanes

3. Site Design:



Which setting is more inviting 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, not set-back requirements.
- 2nd floor residential.
- Expedite permits.



Neenah, WI

Appleton, WI



Elected & appointed officials must be supported if expected to act with vision & courage!

Comfortable setting for drivers and pedestrians?



But how far back?

Preferred sidewalk setback:



**Even a bike lane
adds buffer**

1.0 Fenton minimum

Impressive 1.1 Fenton setback in Concord:



4. Safety & access.

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



Median islands



Roundabout (Neenah, WI)



Curb extensions

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

www.markfenton.com

Four Elements of Healthy Community Design:



**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)*



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

*www.ceosforcities.org/work/walkingthewalk
www.walkscore.com

On Common Ground

Nat'l Assoc. of Realtors pub.;
Summer 2010, www.realtor.org

The Next Generation of Home Buyers:

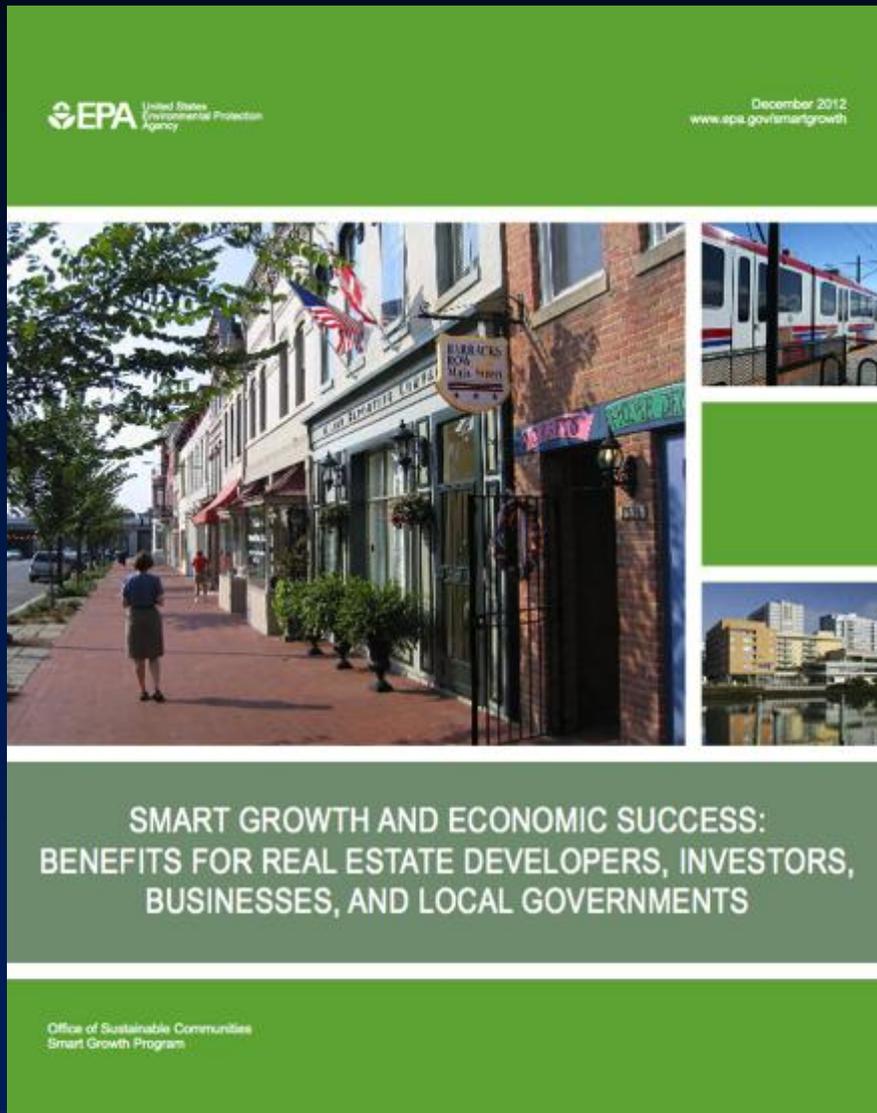
- **Taste for in-town living.**
- **Appetite for public transportation.**
- **Strong green streak.**
- **Plus, Americans are driving less overall!**



Smart Growth & Economic Success

www.epa.gov/smartgrowth/economic_success.htm

Dec. 2012



Benefits to developers, realtors, investors, local governments . . .

- **Less infrastructure in compact development.**
- **Walkability premium.**
- **Flexibility & choice.**

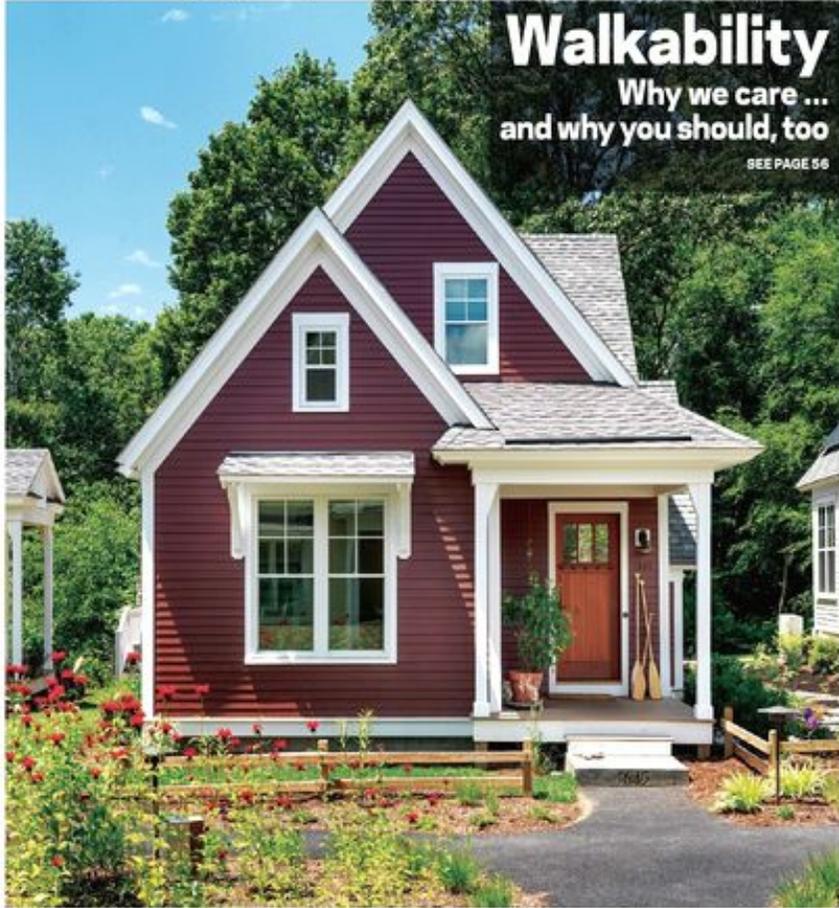
SMART BUILDING STARTS HERE

THE MAGAZINE
OF THE NATIONAL ASSOCIATION
OF HOME BUILDERS

Builder

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

SEE PAGE 56



h.w.

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 . . .

www.markfenton.com

E.g. Concord Riverwalk



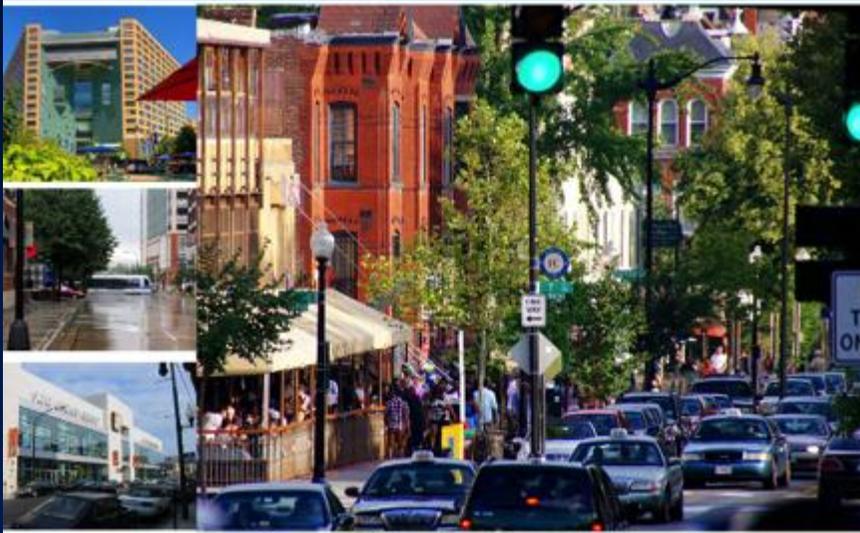
Smart Growth: The Business Case

www.epa.gov/smartgrowth/economic_success.htm

Nov. 2013

EPA United States Environmental Protection Agency

November 2013
www.epa.gov/smartgrowth



SMART GROWTH AND ECONOMIC SUCCESS:
THE BUSINESS CASE

Office of Sustainable Communities
Smart Growth Program

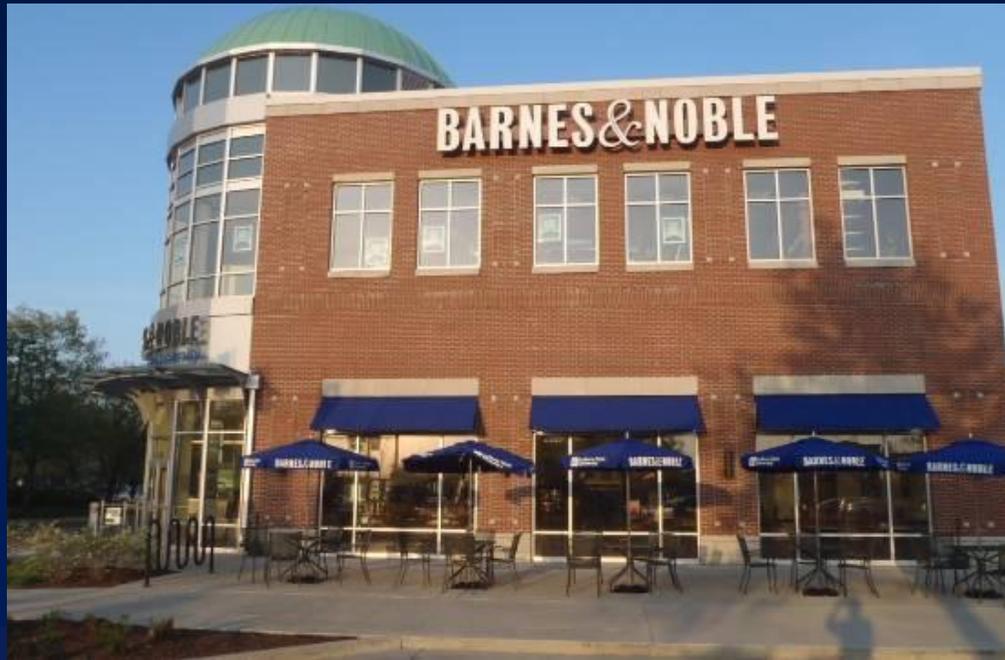
Beneficial to:

- Creative economy, productivity, innovation.
- Competitive for hiring & retaining employees.
- Strong retail sales; transport choice.

www.markfenton.com

What's happening?

- 1st & 2nd generation malls & big boxes are struggling.
- Employers seek vibrant, livable communities, where employee health, satisfaction, & retention are high!



Or more simply:
Which generates more economic activity, parking lots or thriving businesses?

The Triple Bottom Line . . .



Prosperity



Planet



**Healthy
Economy**

**Healthy
People**

**Healthy
Environment**

People

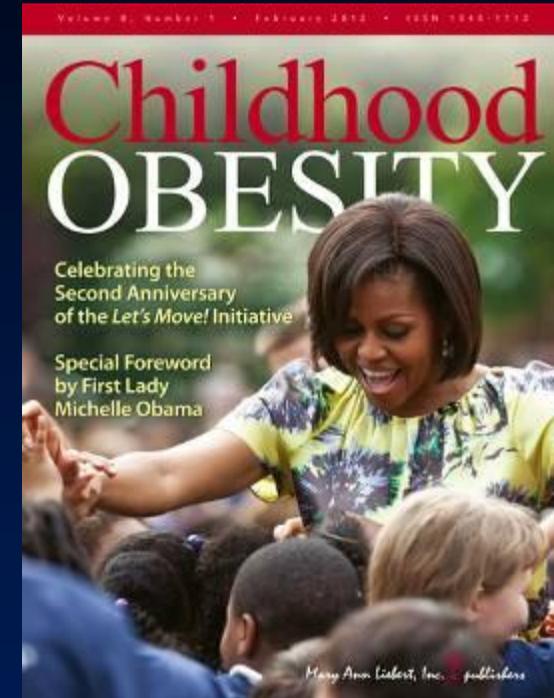
So how to get there?



Policies: Utilize five national movements changing the “health” 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. Update the Comprehensive Plan . . .

- Include *health* as an explicit objective.
- Focus on pedestrian-, bike-, transit-oriented development.



Mixed-use redevelopment, e.g. Thoreau & Sudbury!

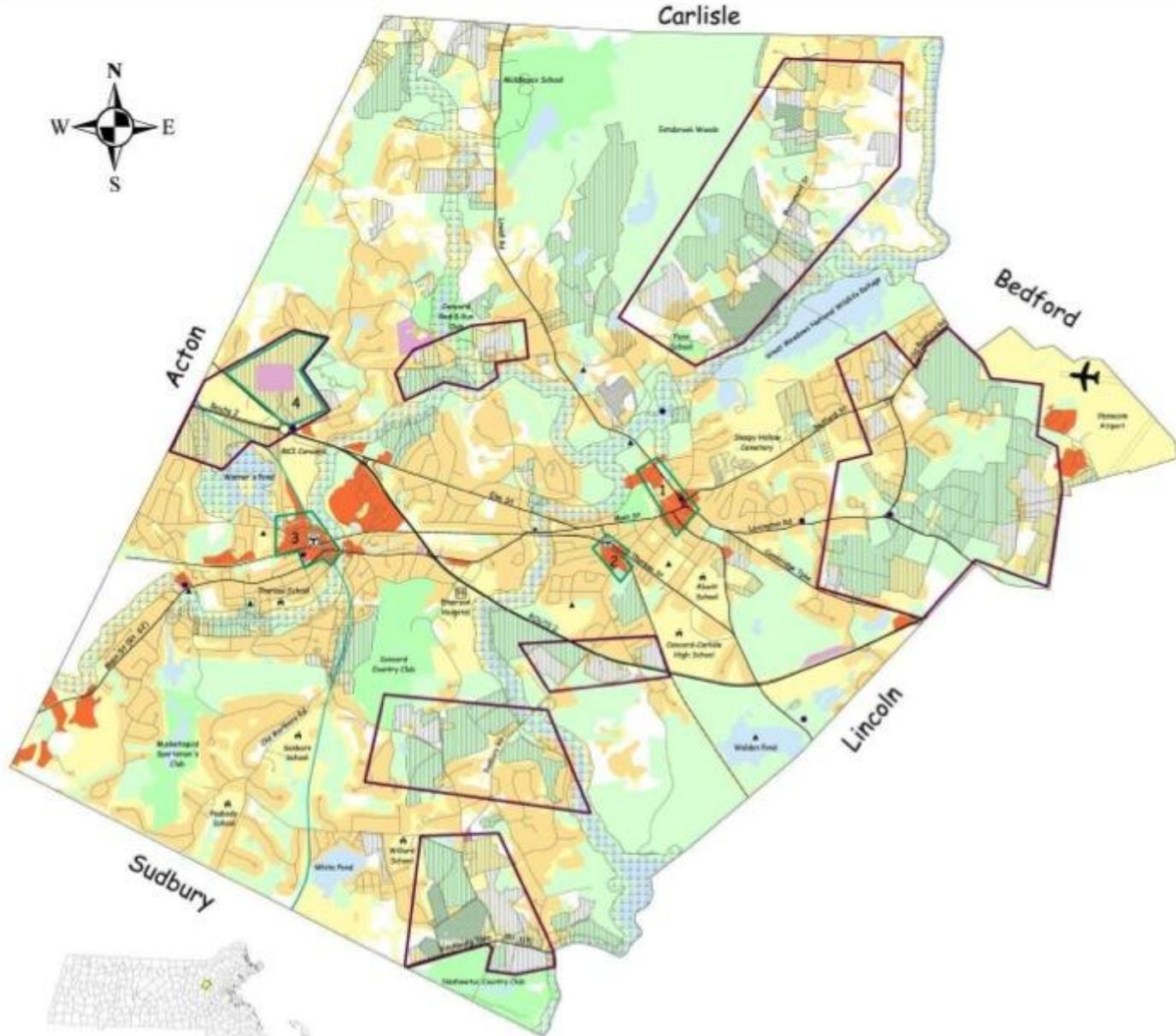


- Multi-story, mixed-use
- Residential & business above retail.
- Parking relief for TOD, bike accommodation.

Town of Concord, Massachusetts



Putting It All Together



Current Land Use

- Undevelopable Land
- Protected Land
- Agricultural Areas
- Areas in Full/Partial Agricultural Use
- Private Recreation/Clubs/Schools
- Rivers & Ponds

Built Areas

- Residential Areas
- Commercial/Industrial Areas
- Historic Sites
- Recreational Sites
- Active Railroad
- Public Schools
- Commuter Rail Station

Future Land Use

- Potential Affordable Housing Sites on Publicly Owned Land
- Wildlife & Water Protection Areas
- Potentially Developable Land Residential/Commercial/Industrial
- Potential Village Overlay Districts
 - 1) Concord Center
 - 2) Depot Area
 - 3) West Concord
 - 4) Prison Farm Land
- Potential Agricultural Overlay Dist.
- Bruce Freeman Rail Trail

How to read this map: The underlying color signifies the land use of the property. A pattern over a color (such as a line, hatch or plants) is an overlay that provides additional information on the use of the property.

West Concord



Concord Center

Step 1: Require **multi-modal transportation** analysis (not just *traffic*) for all development.



Mitigation = transit, bike, & pedestrian facilities, possibly systemic rather than on site.

**Require the
connections . . .**

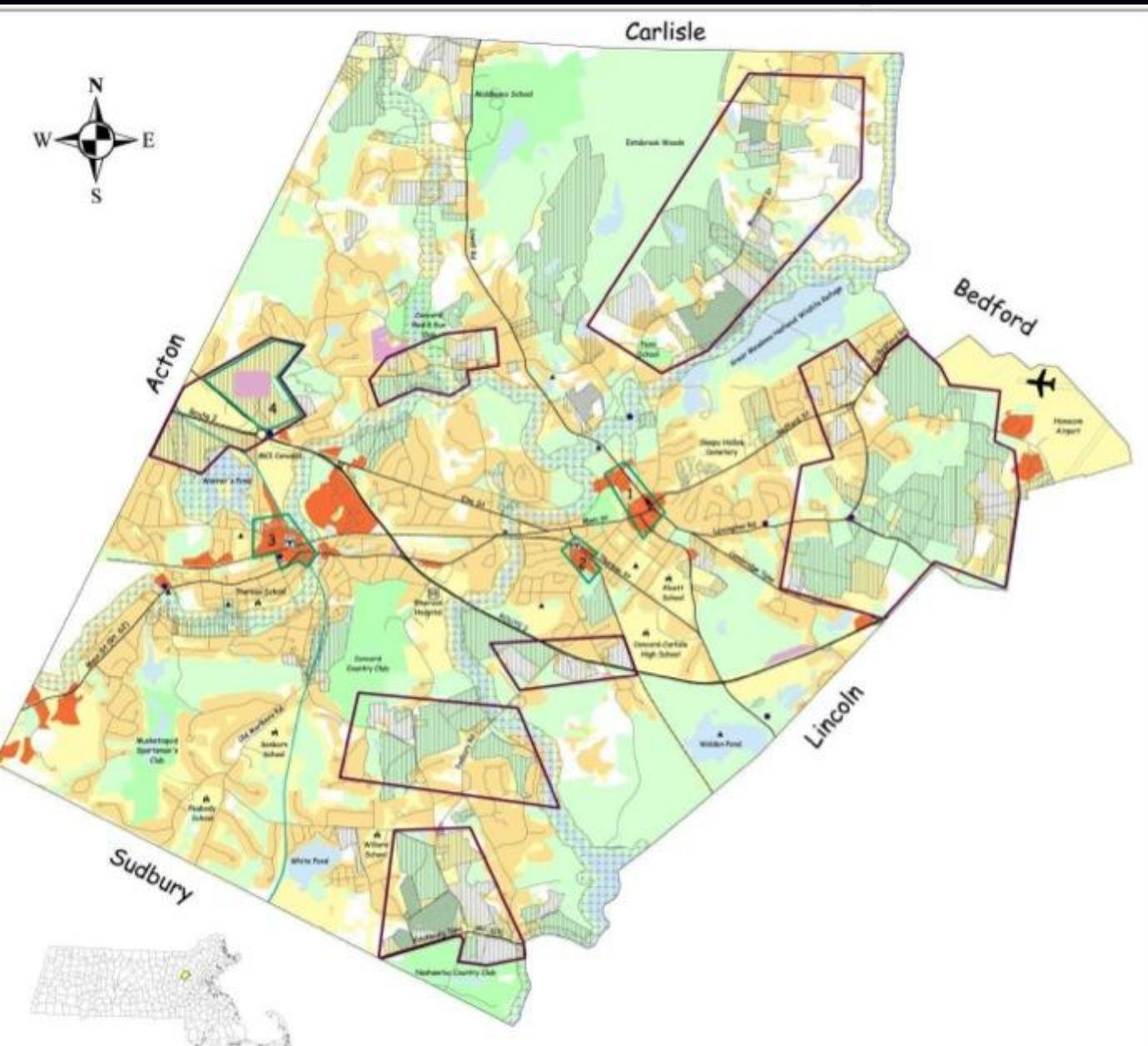
Bruce Freeman Rail Trail



Sanborn Middle School

Link to Willard Elem.



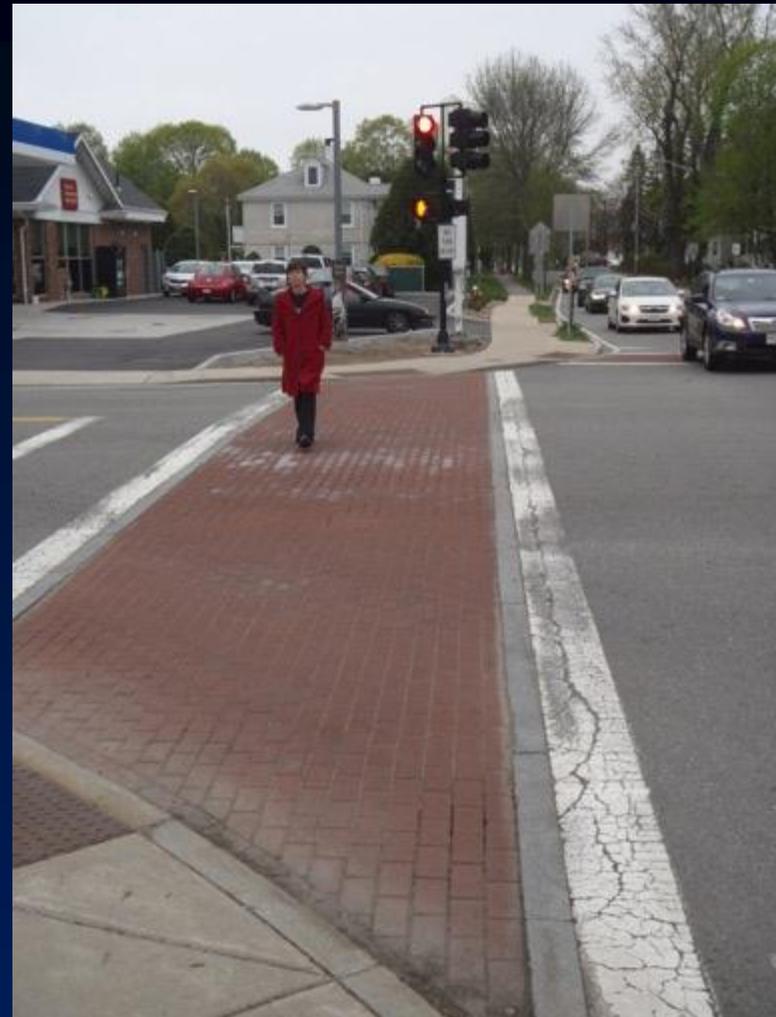


Reflect the Comprehensive Plan in zoning ordinance, subdivision guidelines, & permitting practice.

2. Build Complete Streets into ordinance:

- All users (**pedestrians, cyclists, transit riders, & drivers**) of all ages & abilities considered in every road project (new, repair, maintenance).
- Only limited, specific exceptions.









**Calming traffic
on Stow St.?**



**Mini-circles w/
mountable curb
can replace 4-way
stops & speed
bumps.**





W. Concord





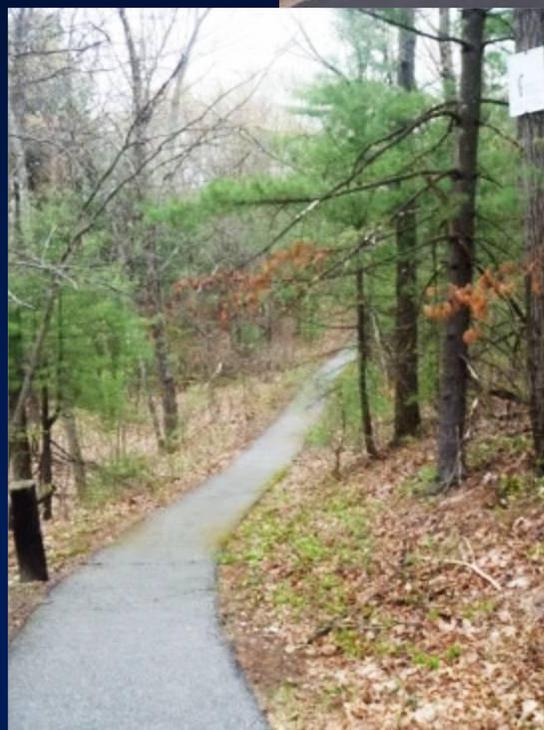
Target phases of CS implementation:

- i. **Step 1:** Pass a policy resolution or executive order (*whereas . . . be it resolved . . .*)
- ii. Adopt detailed roadway design standards or *guidelines*.
- iii. Execute more **demonstration projects**.
- iv. Include CS principles in absolutely every project (including routine paving, painting, & maintenance work, etc.).

3. Develop trails for transportation, not just recreation . . .

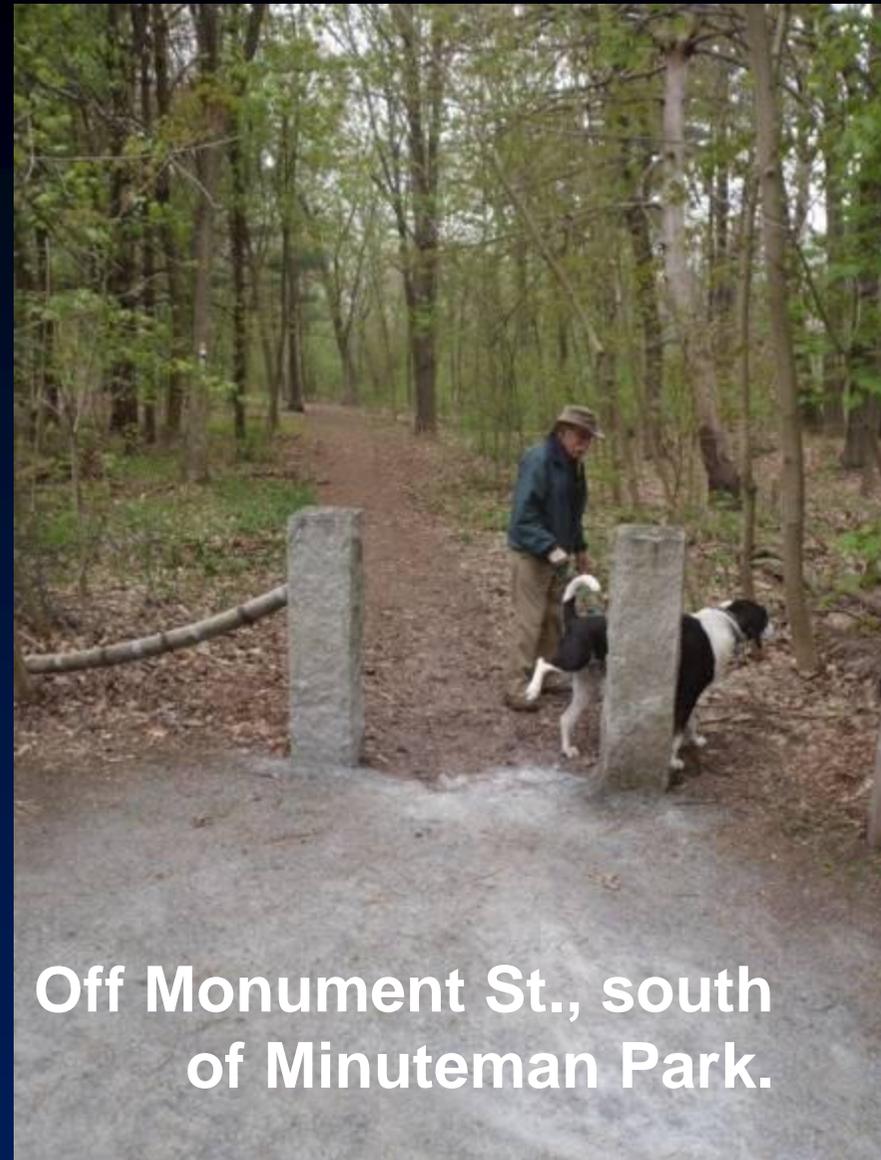
- **Connect** to the transport network (sidewalks, bike lanes, transit stops).
- Focus on **destinations** (schools, shopping, parks, senior housing)
- Weave into the **fabric of the community.**

Cape
Cod
Rail
Trail



Bedford is working to extend the Minute Man Trail.

Could Concord link the Freeman & Minute Man?



Off Monument St., south of Minuteman Park.



Lowell Rd, at Keyes

4a. Focus on supporting transit by every mode.

- Optimize **bicycle & pedestrian** links to stations!



Parking: Recognize the relative costs of bike vs. car parking.

- Quality, creative bicycle parking.
- Eventually make auto parking pay for itself.



4b. Create a bicycle-friendly community.

- Maps, way-finding signs.
- Education, skills. >
- Bike lanes, sharrows, even curb lines on adequate streets.



www.bibc.us

www.markfenton.com

Bike friendly community.

- More secure, covered bicycle parking.
- Bike sharing – start small.



Salem Spins



Wheelhouse, Bradford Mill

5. Comprehensive Safe Routes to School program.

- **Evaluate** where kids come from, by what travel mode.
- Community workshops . . .
- **Engineer** improved routes.
- **Educate & encourage** safe behavior (drivers & kids).
- **Enforce** proper speeds, procedures for all.



Scituate



www.saferoutesinfo.org

www.commute.com/schools

E.g. Systematic approach.

- **Program.** Walking school buses, bicycle trains, safety education, events.
- **Project.** Construct remote drop-off in adjacent park.
- **Policy:** Move bus/car drop-off/pick-up to park; **5 min. car safety delay** to let ped, bike, bus riders clear.

www.saferoutesinfo.com



Columbia, MO



***Step 1:** Show-of-hands surveys in all schools.

www.markfenton.com

Why care about stickiness & active community design?

- The **inactivity** epidemic; **our kids may pay!**
- **~4,000** pedestrian, **~40,000** motor vehicle, **~400,000** sedentary-related deaths/year.
- **Greenhouse gasses**, over an hour of average commute time/day, traffic congestion and costs.
- Dependence on **foreign oil**; **wars** in Mid-east.
- More eyes on the street, **less crime**.
- Shopping locally, healthier **housing values**.
- Higher employee retention, higher productivity, **lower health care costs**.

This guy
is a new
model of
success!





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

Healthy Communities Act

HB1859 – An Act Promoting the Planning & Development of Healthy Communities

- Engages health in the planning, permitting processes.
- Encourages mixed-use, ped-, bike-, transit-friendly areas; protecting farmland.
- Encourages affordability.
- Allows ‘transportation’ not just ‘traffic’ analysis & impact mitigation.



Active & Healthy Streets Act

S68/H3091 An Act Relative to Active Streets & Healthy Communities

- **Outlines concrete steps for communities to consider pedestrians, bicyclists, transit, & motor vehicles in all roadway work.**
- **Opportunities to incorporate during routine painting, paving, maintenance, utility work!**



Nantucket



Barnstable