

Building Community Health with Sticky Design



-

COMPASS

Ada & Canyon Co., ID
June 2013



This gives
me hope!

Answers to the typical questions:

- 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 the **prescription** for healthy design (& how do we **get there**)?



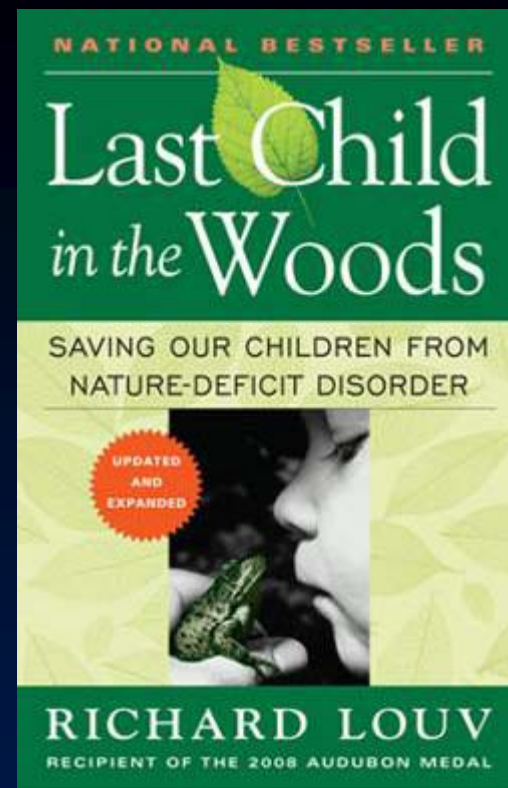
Youthful recollections





30-Nov-2009

Not just my idea . . .



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

By Alan Brown

OLYMPIC swimmer and Shane Gould has blamed 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.

The swimmer, who won five individual medals at the 1972 Munich Olympics, yesterday picks out against children as young as five being pushed into team sports, rather than encouraged



Gould

to play naturally.

Gould said home-entertainment TV shows emphasising aesthetically pleasing contraptors had encouraged people to ditch traditional backyards.

"I believe that children are over-organised and they don't have enough opportunity just to play naturally," she said.

Currently working on a master's 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* publication in state capitals.

She blames the loss of traditional Australian backyards and the "unplanned" of public play grounds as factors reducing children'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 wrote.

"The aim to blame someone for a child's fall seems a piece of governmental equipment has had the appalling knock on effect of almost eliminating child's play and led to this deceiving report on our public spaces."

"Children prefer a log and a stick to play structures," Gould said.

Howard 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 wrote.

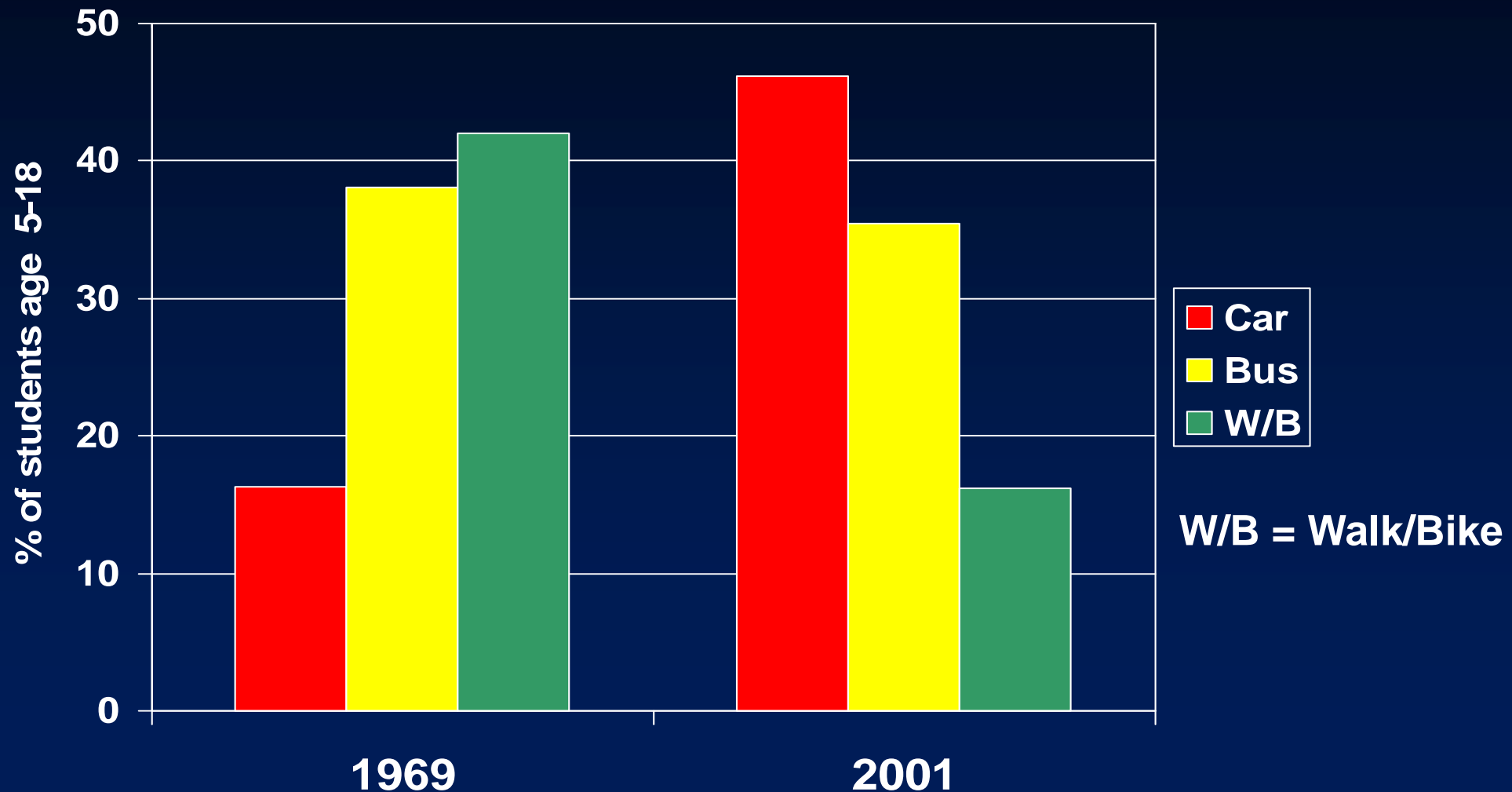
Gould said children today were missing out on "lack of movement experiences" such as reading, climbing, burping and spinning.

Have your say at theaustralian.com.au

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

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



Centers for Disease Control and Prevention. National Center for Health Statistics. *National Health Examination Surveys II (ages 6–11) and III (ages 12–17), and National Health and Nutrition Examination Surveys I, II and III, and 1999–2006.*

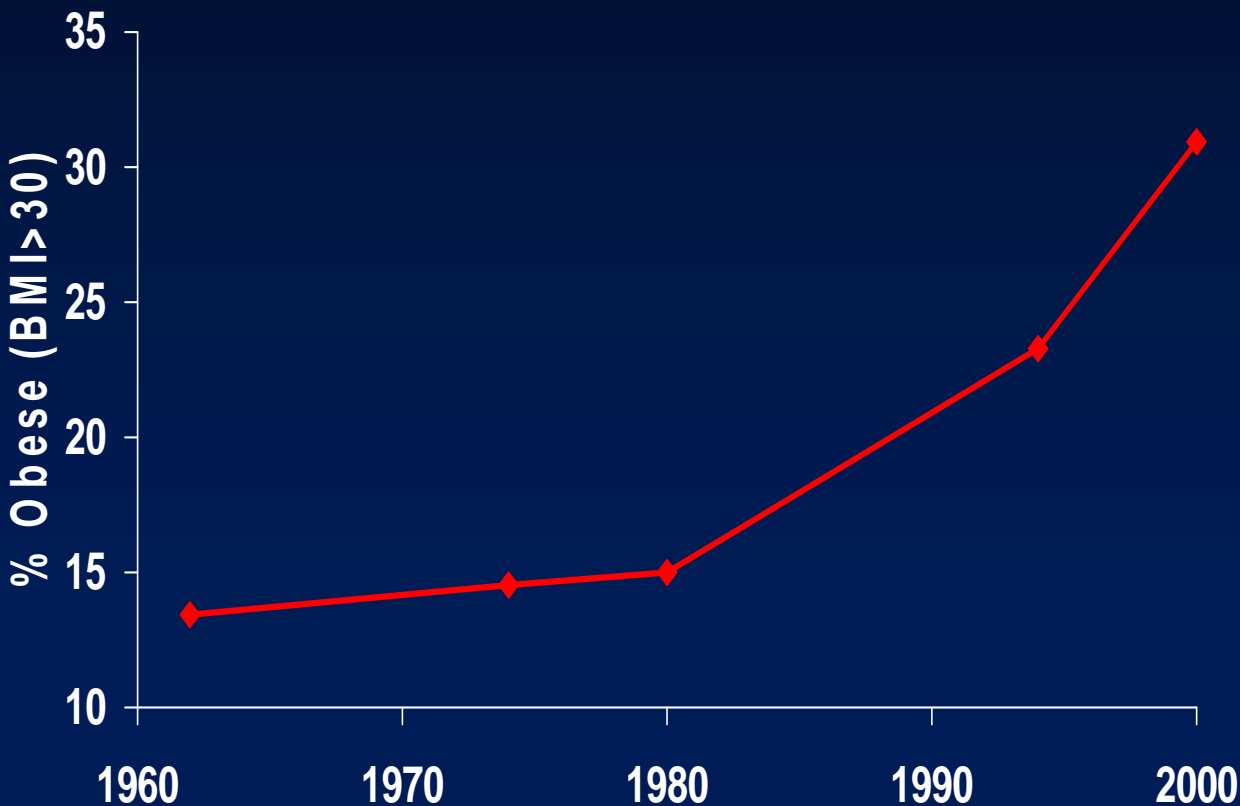
www.rwjf.org/files/publications/annual/2008/year-in-review/

www.markfenton.com

America's looming chronic disease apocalypse . . .

US "Obesity Epidemic"

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



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 American adults actually meet this recommendation (thru LTPA).

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

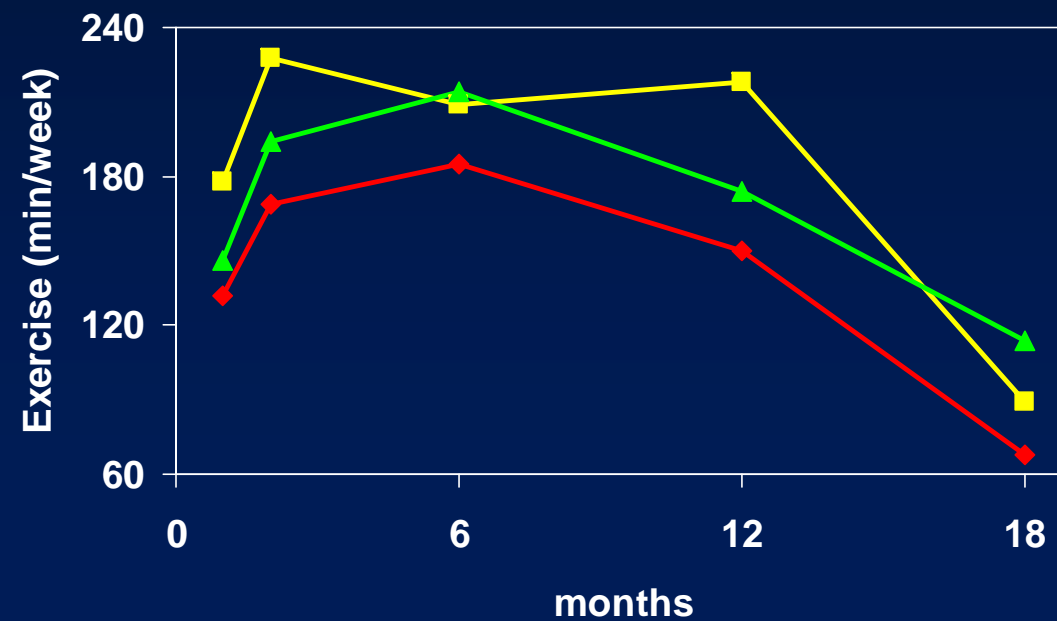


Exercise

Participation

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

This counts!
2008 US Physical Activity
Guidelines
health.gov/paguidelines



**Fine for some,
but clearly
not enough . . .**



Joseph



**. . . we need
communities
where people are
intrinsically more
active.**

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

YES! Four elements:

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



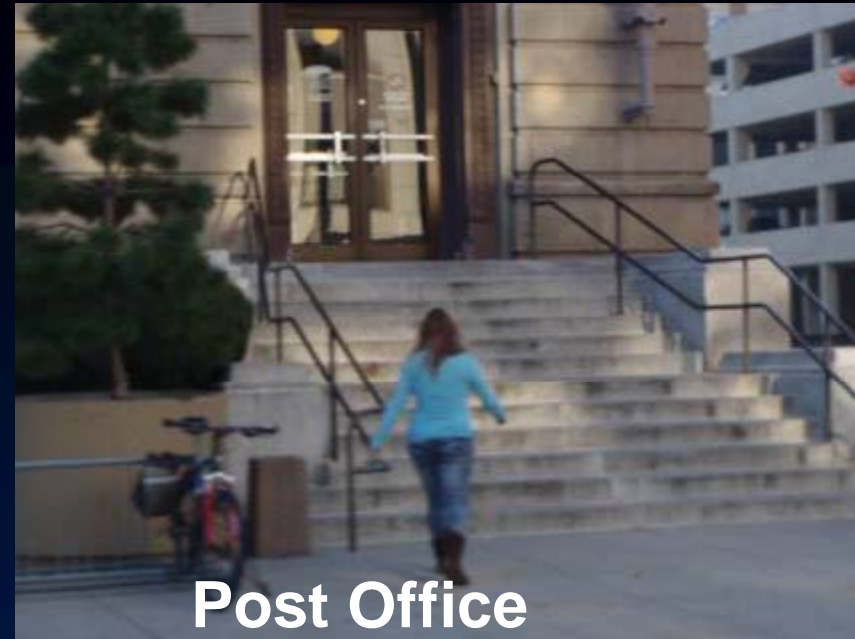
www.thecommunityguide.org

CDC Guide to Community Preventive Services

www.markfenton.com

In planner language:

- Mix of land uses; varied clusters.
- Comprehensive network, all 4 modes.
- Functional & inviting site designs.
- Universal safety & access for all.



1. Land use.

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



E.g. post office, grocery, schools

Compact neighborhoods & shared open space.

Mixed use, multi-family.

Housing above, retail below.



2. Network encourages active travel with:



- Presence of sidewalks, trails, bike lanes, sharrows.
- Shorter blocks, cul-de-sac cut-throughs, more intersections.
- Access to quality, reliable, affordable *transit*.



3. Site design:



Anywhere, USA

Which setting seems more appealing for travel on foot and by bike?

Site design?

Boise



- 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.



Sample incentives:

- Decrease, share parking (bike parking req., bonus).
- Build-to, not set-back requirements.
- Residential bonus.
- Expedite permits.



Neenah WI



Appleton WI

Elected & appointed officials must be supported if you expect them to act courageously!

Walgreens at Park & Myrtle



4. Safety.

- Engineering can dramatically 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.)

Diagonal parking increases on-street capacity, but . . .



Meridian



Des Moines, IA



- Reverse angle:**
- Fewer, less severe collisions.
 - Safer for bikes.
 - Slows traffic.



8th St., Boise



5. Healthy food is affordable & accessible.

Community gardens (near schools, parks, senior housing); CSAs, urban agriculture.



Farmers market.



Regulate fast food, drive-thru locations.



Five Elements of Healthy Community Design:



Ped, bike,
& transit
network



Safety &
access



Healthy affordable
food



www.activelivingresearch.org

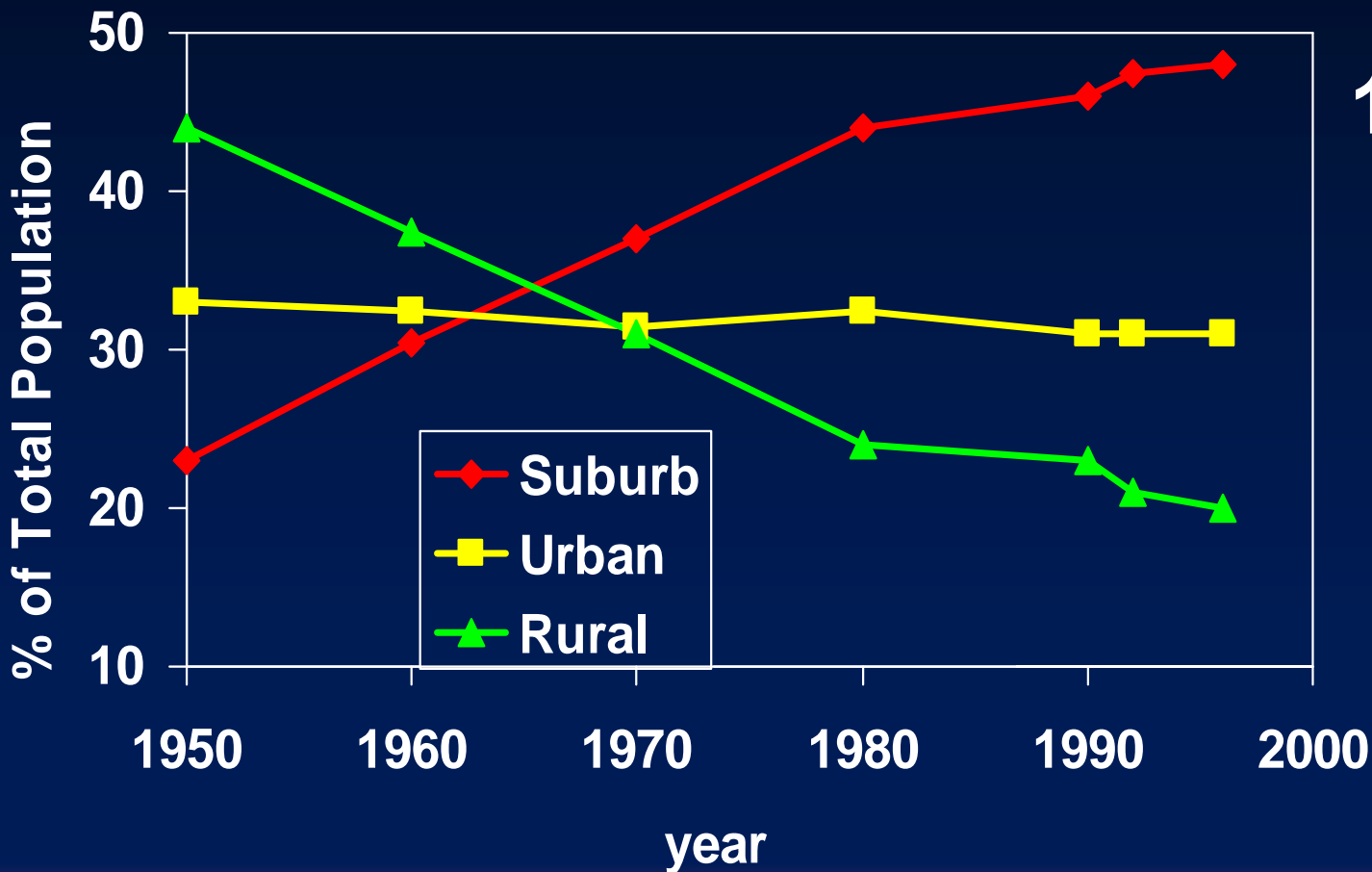
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“But what about rural areas . . . ?”

Suburbanization of America

US population shift, 1950-1996

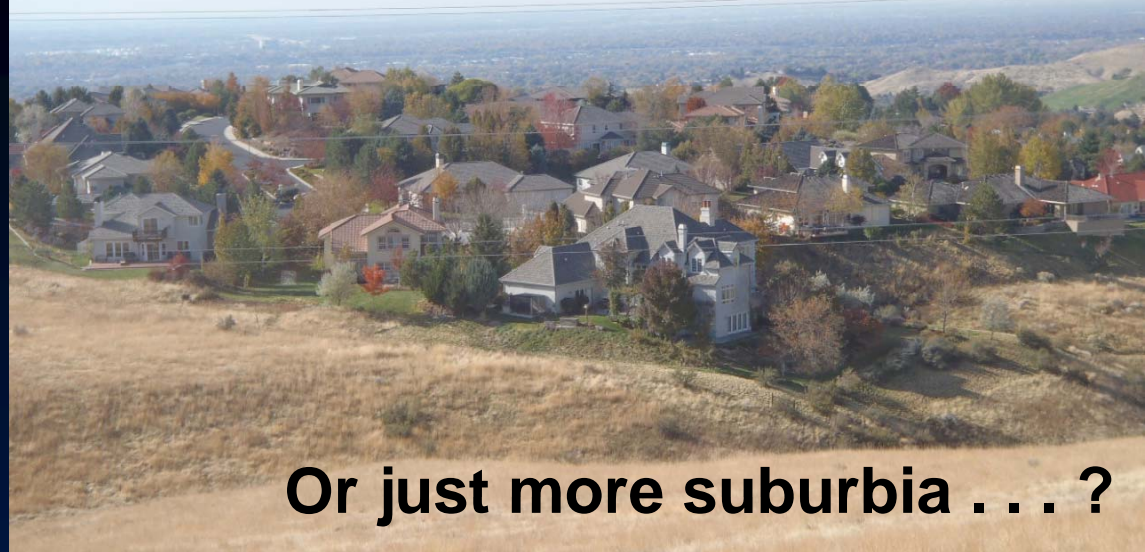
(after *Bowling Alone*, R. Putnam, 2000)



1. Suburbia is steadily consuming the landscape . . .

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

“Rural” housing?



Or just more suburbia . . . ?



Caldwell, ID

e.g. Fairview Ave.



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

First: Internalize external costs.

Environmental:

- Reduced traffic; air, water, & noise pollution.



Safety:

- Kids, elderly mobility.
- Crime deterrent.



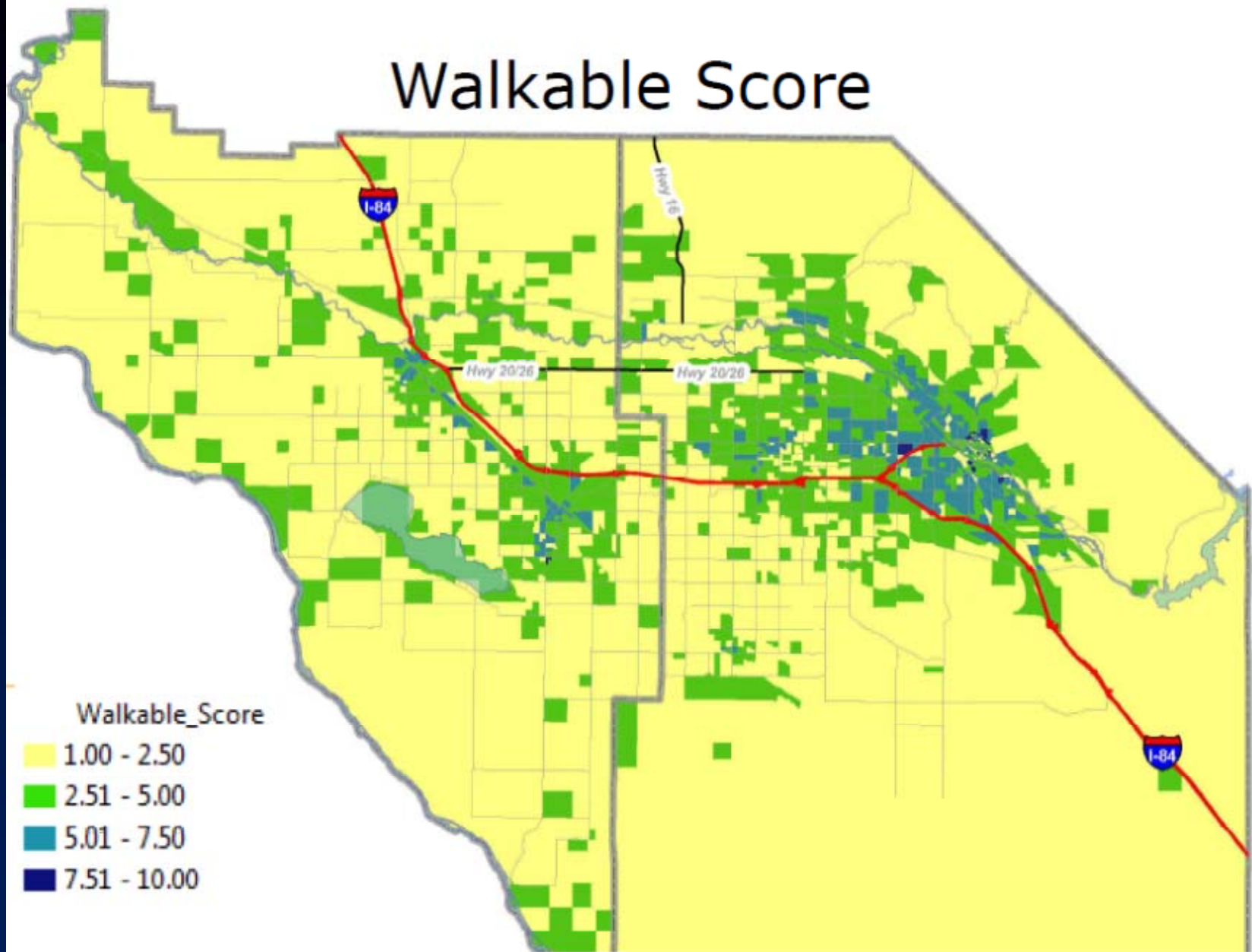
Social:

- Equitable transportation.
- More personal connections.

Education, schools:

- Student health, safety.
- Behavior & performance!
- Transportation costs & infrastructure.
- Community engagement; schools as neighborhood centers.

Walkable Score



From CIM 2040 planning session . . .

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



walkscore = 6



walkscore = 69

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

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

On Common Ground, Summer 2010

Nat'l Assoc. of Realtors; 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!**





“Active Urban Lifestyle. . .”

Downtown condos v

“The Bridge Town Homes”



www.markfenton.com

The conundrum:

- 1st & 2nd generation strip malls & boxes flounder . . .
- Employers want livability, employee retention, low health-care costs.



E.g. Albertson's Plaza,



Winter
Park, FL

More simply: Which adds more to the economy, struggling malls or thriving centers?

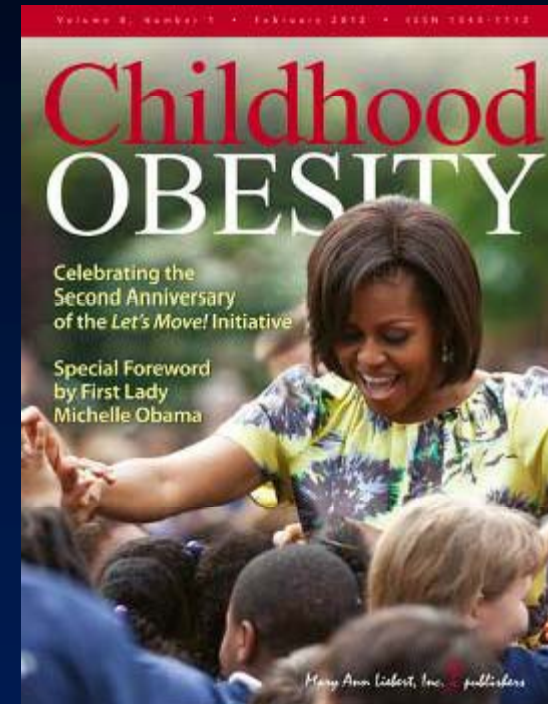
How to get there?



Act up: Support five national movements changing the physical activity landscape.

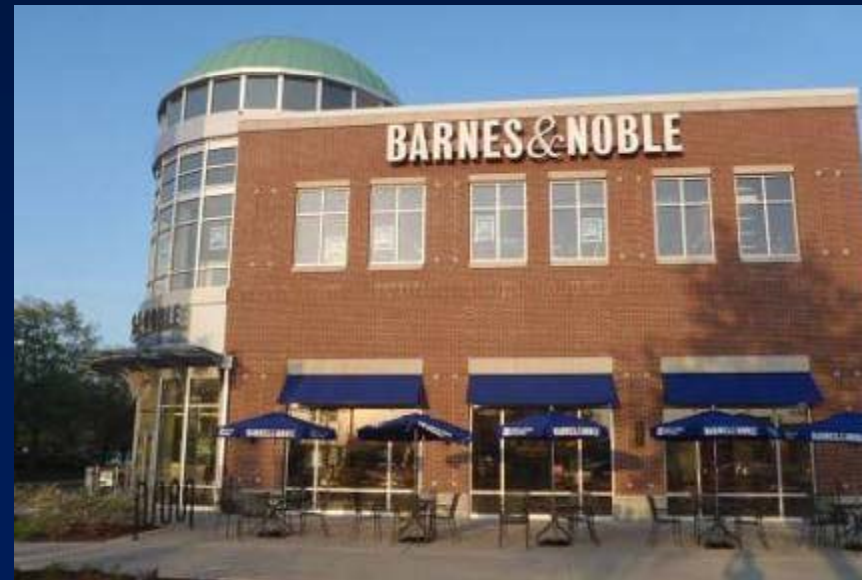
(Fenton, Community Design & Policies for Free Range Children, *Childhood Obesity* 8(1), Feb 2012)

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



1. Land Use: Are you a Change Agent or Process Server?

- Create mixed use centers, protect agricultural land, focus development.
- Provide TA, plans, & model codes.
- Make the economic & health arguments!



Terre Haute, IN. [^] www.markfenton.com



Quail Ridge, Caldwell



**Boise, ID
1900's**

Grids, alleys, even accessory dwellings



Longmont,
CO



Bluffton, SC 2000's



Creating villages to support seniors' lives.

Idaho Statesman,
June 2013

Pocket neighborhoods
USA Today, Mar 2011 >



Forwarded by friends Brian and Colleen Dwyer, right, chat with neighbor Eileen McEaden on their front porch in Shoreline, Wash., where eight bungalows share a yard, garden and common building.

Cozy cottage industry has sprawl on move

New pocket neighborhoods — clusters of bungalows that share outdoor living space — appeal to those who are downsizing, going green or want a close-knit community

By Lisa O'Leary
USA Today

When Brian and Colleen Dwyer's two adult children moved out, their large empty house was a quiet dead-end street in Seattle suburb and its fancy lot.

"We had a big, 2,500-square-foot house that we weren't using," says Brian, 54. "We had a very large yard. We felt bad to let every weekend trying to make it look halfway decent. It was a great house, but too big."

"They looked for something smaller, but their only options were condominiums — and they saw an ad for an unusual kind of development."

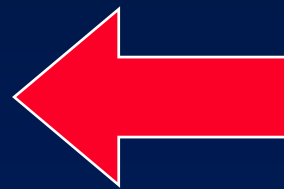
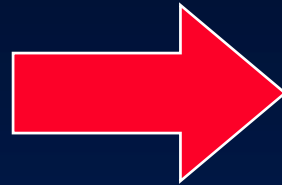


Purchase & transfer of development rights.

Caldwell



\$



Increase density.



Communities in Motion 2040:

- Transit, Trails, & Transit Oriented Development (TOD) option most in-line w/ healthy design.
- Steer, don't just respond, to land use.



- E.g. **Health Impact Assessments.**
- **Count costs of physical inactivity!**

E.g., Metropolitan Area Planning Council, Boston area MPO

- **Regional transit proposed fare increases & service reductions.**
- **MAPC Health Impact Analysis (HIA) of two proposed scenarios.**
- **Used HEAT for costs of reduced physically active commuting.**



www.mapc.org/resources/health-impact-assessment

E.g., Health Economic Assessment Tools; 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:

- average days walked
- % of round trips
- years to full impact . . .

On-line tool: www.heatwalkingcycling.org

MBTA 2012 fare, service proposal

HIA by Metro Area
Planning Comm.

Annual Costs (\$ millions)	Scen. 1	Scen. 2
Additional time in traffic	\$137.5	\$186.0
Additional fuel burned	\$22.7	\$31.8
Additional crashes (car, ped, bike)	\$33.6	\$48.8
Added mortality & hospitalizations (air pollution > asthma, lung, heart disease)	\$1.5	\$2.1
Lives lost due to decreased physical activity (statistical value of life years)	\$74.9	\$116.5
Cost of carbon emissions	\$1.9	\$1.7
Total annual costs:	\$272.1	\$386.9

2. ACHD, COMPASS, cities to support:

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

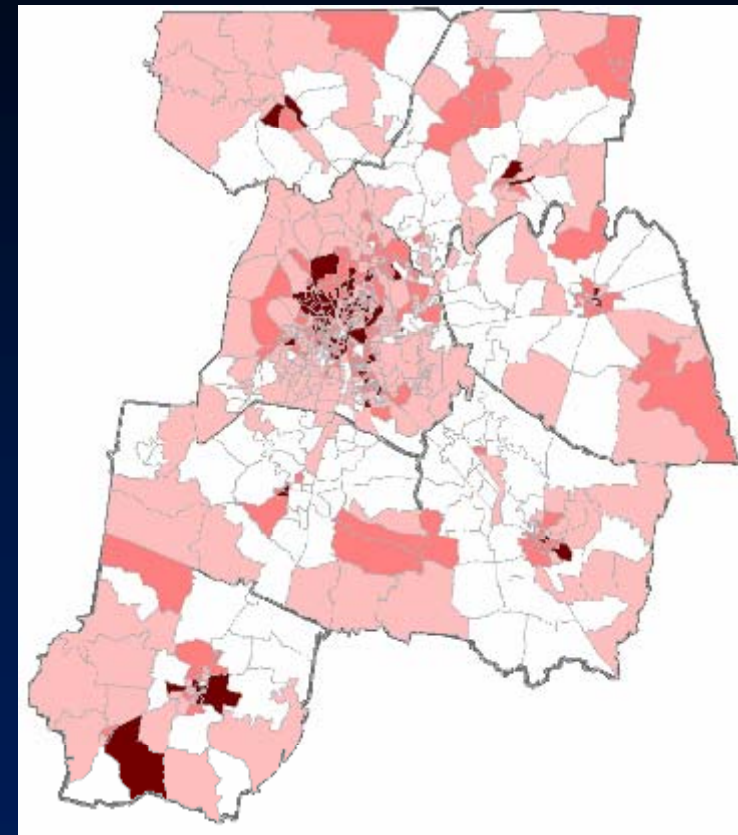


www.completestreets.org

www.markfenton.com

E.g. Nashville Area MPO Complete Streets implementation

- Public input in 2035 LRTP process showed strong interest ped/bike/transit.
- 60% of project scoring rewards air quality, physical activity, health, safety of all modes, & underserved areas.

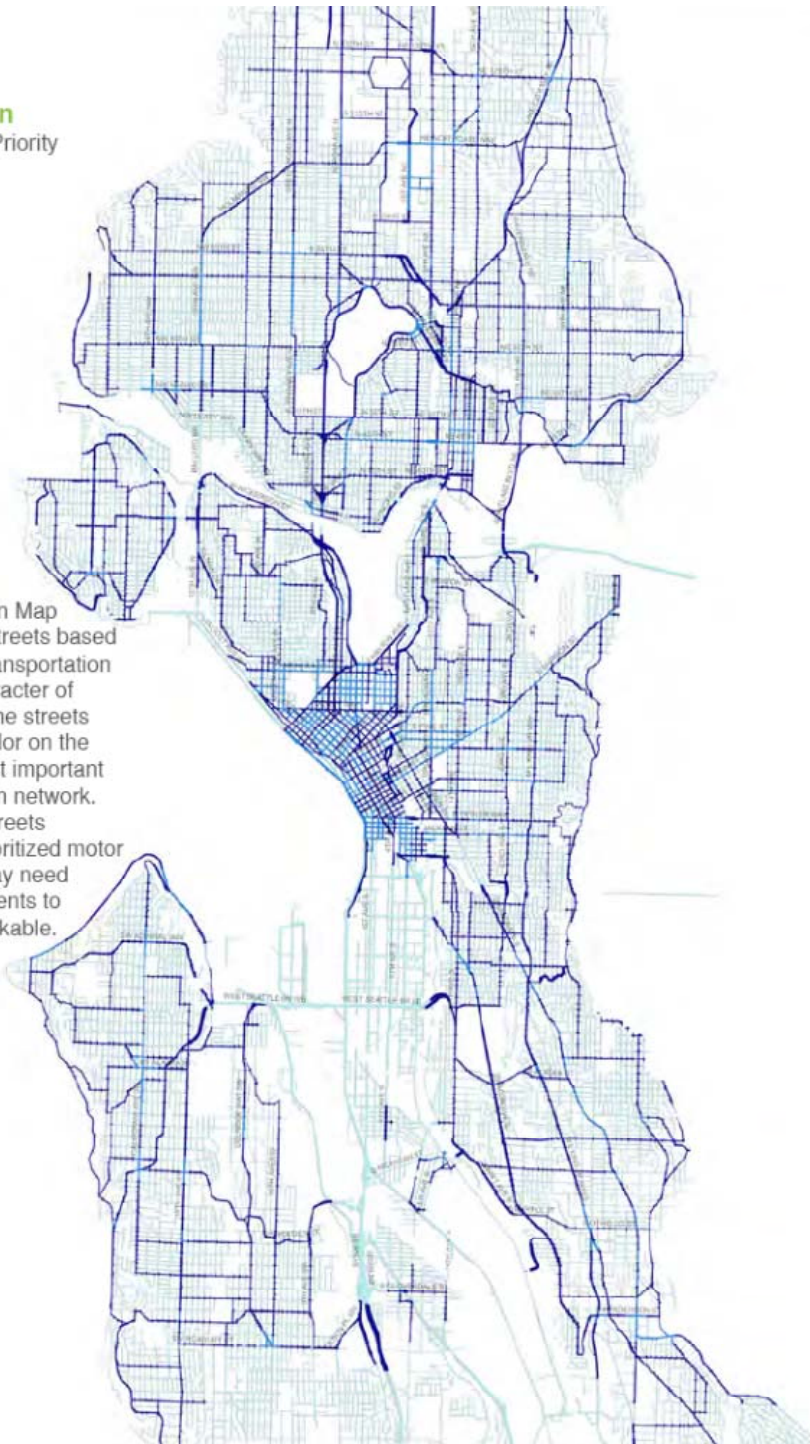


MPO identified Health High Impact Areas. ^

Corridor Function
Pedestrian Linkage Priority



The Corridor Function Map prioritizes Seattle's streets based on their role in the transportation network and the character of adjacent land use. The streets with a darker blue color on the map provide the most important links in the pedestrian network. Additionally, these streets traditionally have prioritized motor vehicle travel and may need significant improvements to make them more walkable.



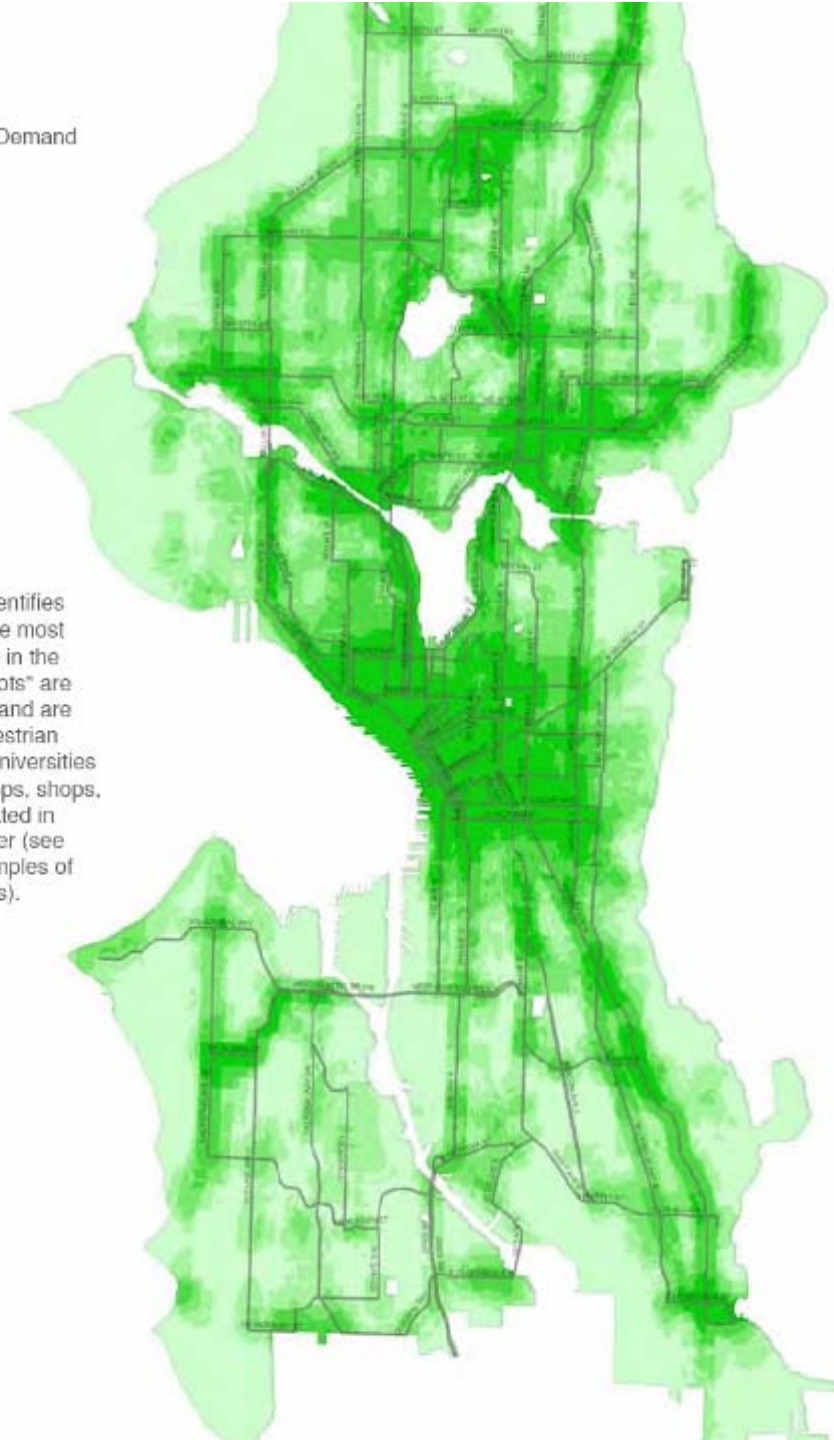
Seattle, WA Pedestrian Master Plan.

Function:
Most important
links in the
network;
functional route
priorities.

Vibrancy

Potential Pedestrian Demand

Low High



The Vibrancy Map identifies where pedestrians are most likely to be today and in the future. These "hot spots" are shown in dark green and are based on where pedestrian generators such as universities or schools, transit stops, shops, and services are located in proximity to each other (see page 8 for more examples of pedestrian generators).

Economic vibrancy:
Density of trip generators, destinations, transit hubs.

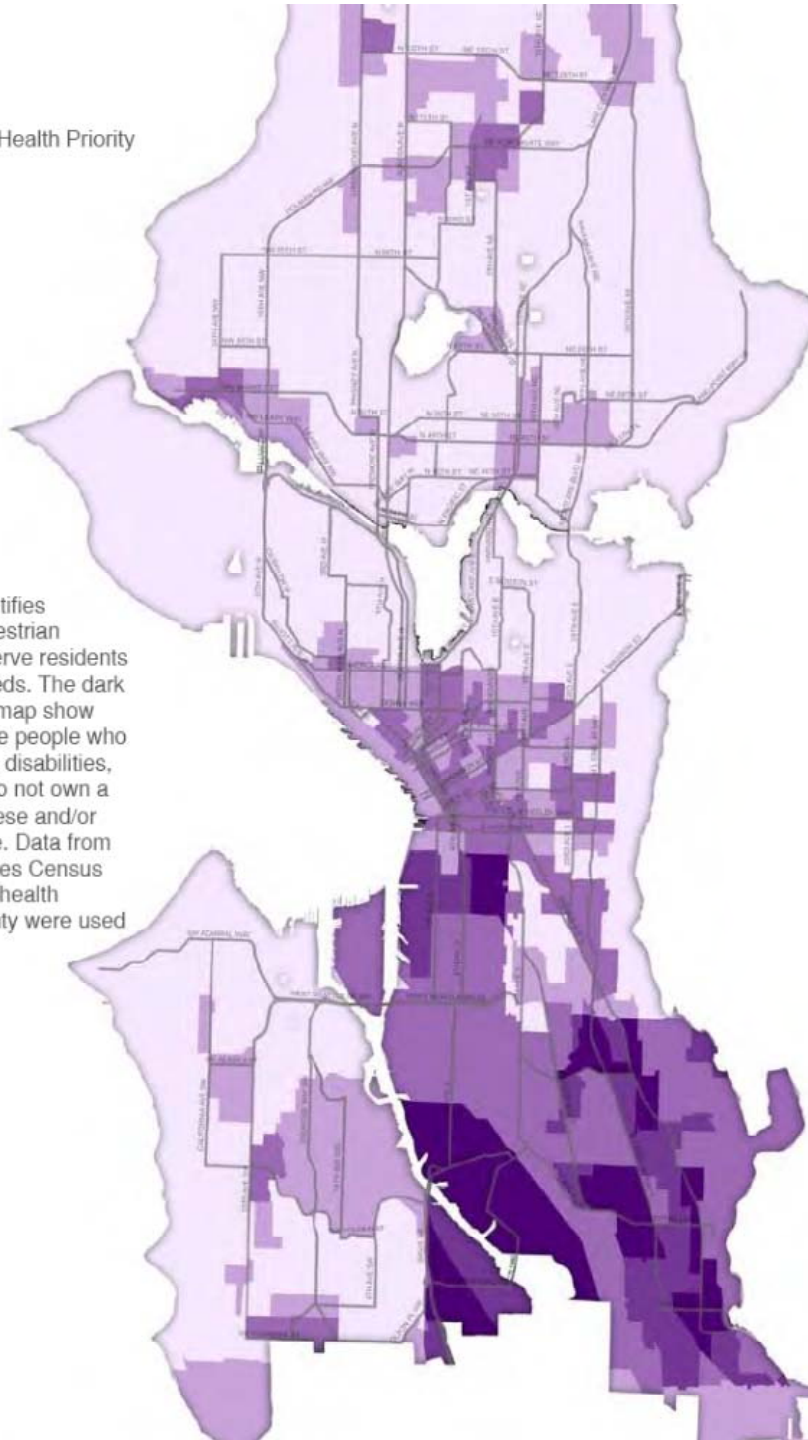
Equity

Socioeconomic and Health Priority

Low High



The Equity Map identifies locations where pedestrian improvements will serve residents with the greatest needs. The dark purple areas on the map show where there are more people who have lower incomes, disabilities, and diabetes, who do not own a car, and who are obese and/or less physically active. Data from the 2000 United States Census and the most recent health survey by King County were used to create this map.



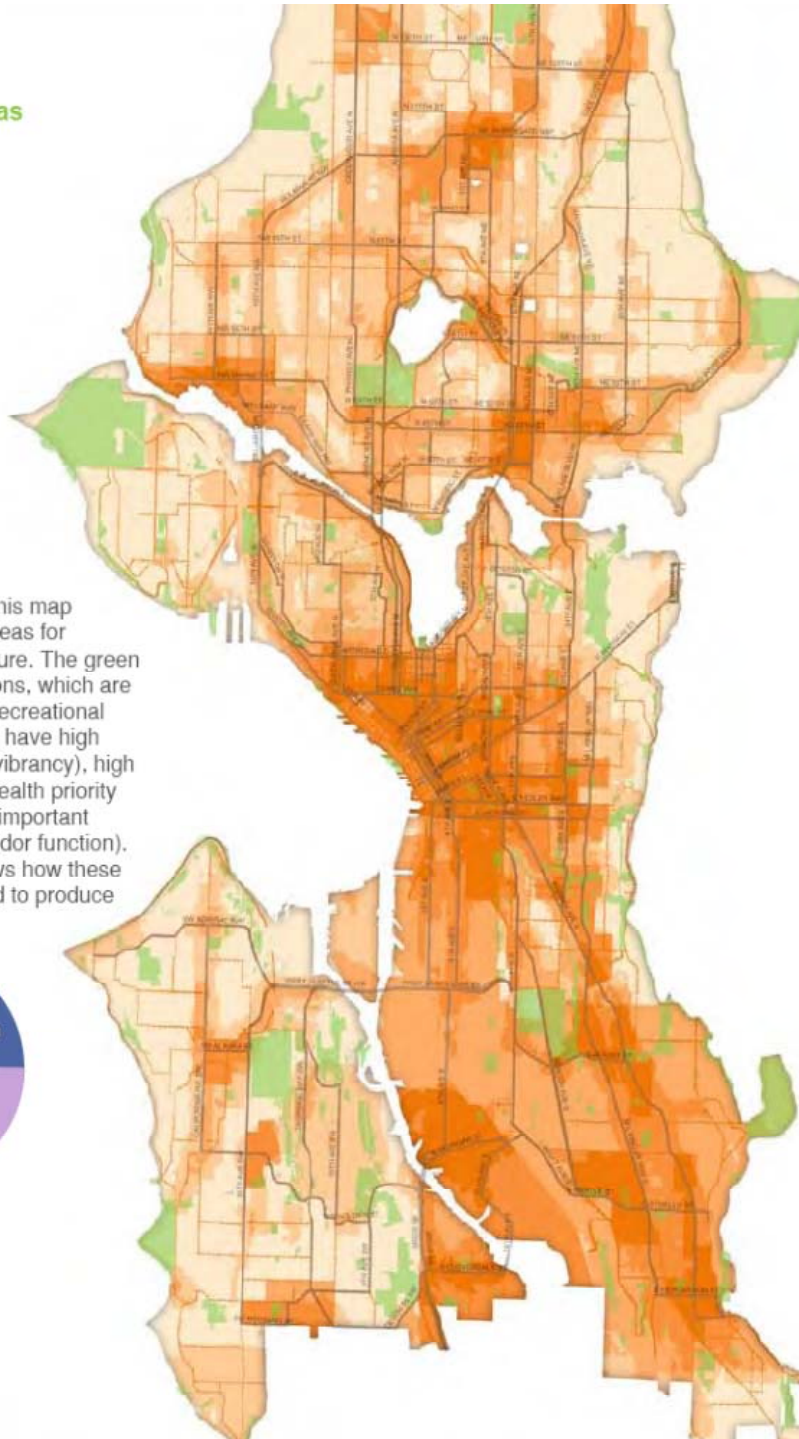
Areas of need:

- Health risks (lack of physical activity, obesity, diabetes).
- Disabilities
- Lower income
- No car

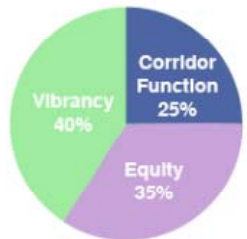
High Priority Areas

Priority

Low High



The dark orange on this map shows high priority areas for pedestrian infrastructure. The green highlights park locations, which are important places for recreational walking. These areas have high pedestrian demand (vibrancy), high socioeconomic and health priority (equity), and provide important pedestrian links (corridor function). The chart below shows how these factors were weighted to produce this map.



TIP priorities:

Vibrancy: 40%

Equity: 35%

Corridor function: 25%

< High Priority Areas

Are massive, one-ways “complete?”

- Primary purpose – move more cars faster.
- Revert to two-way, narrow, build a functional grid.



Lane re-alignments

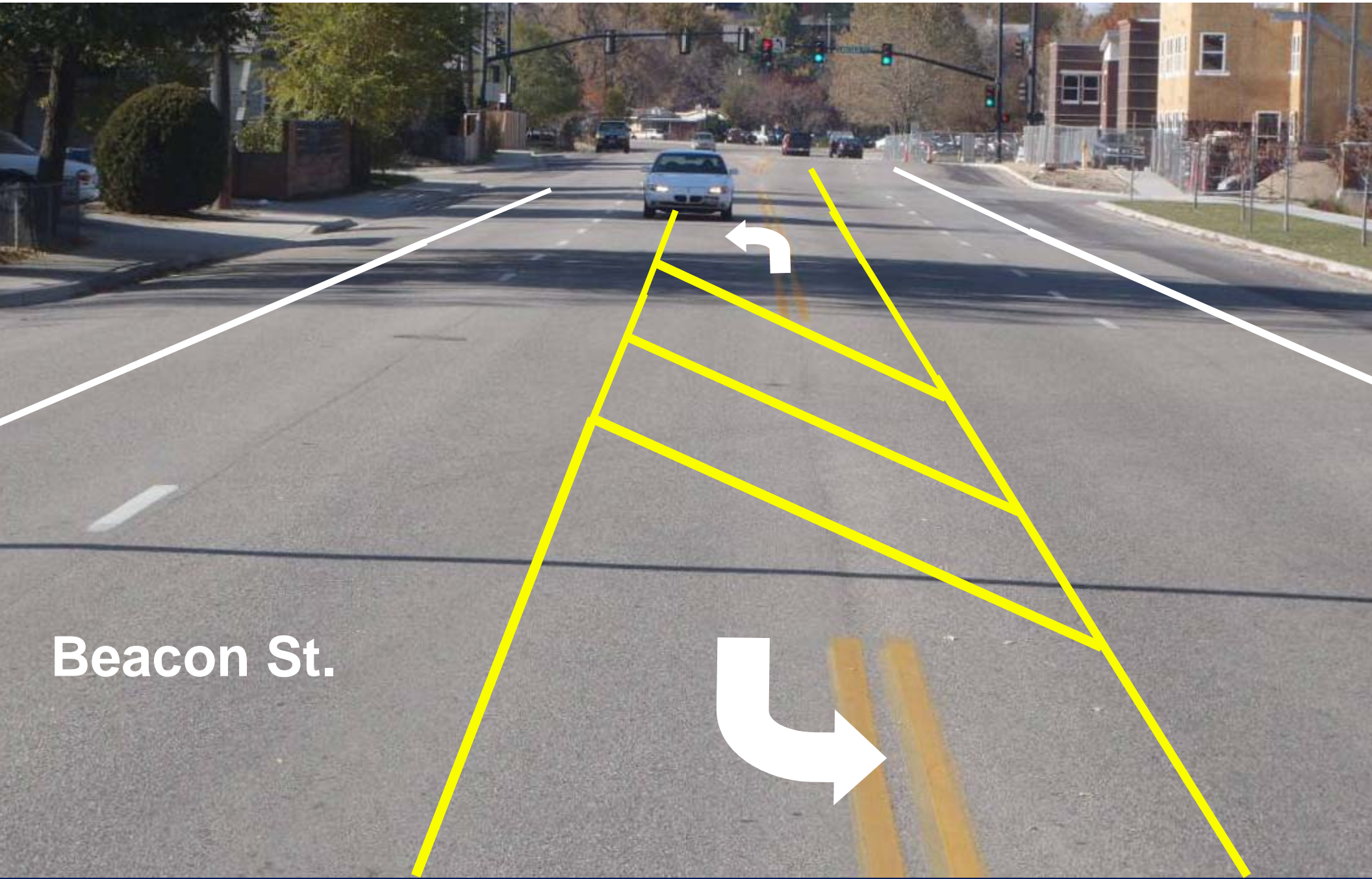
- Often called road diets, being seen more often.



Urbana, IL; before & after.



- Can reduce collisions & severity.
- Dramatically improves performance for pedestrians & cyclists.



Beacon St.

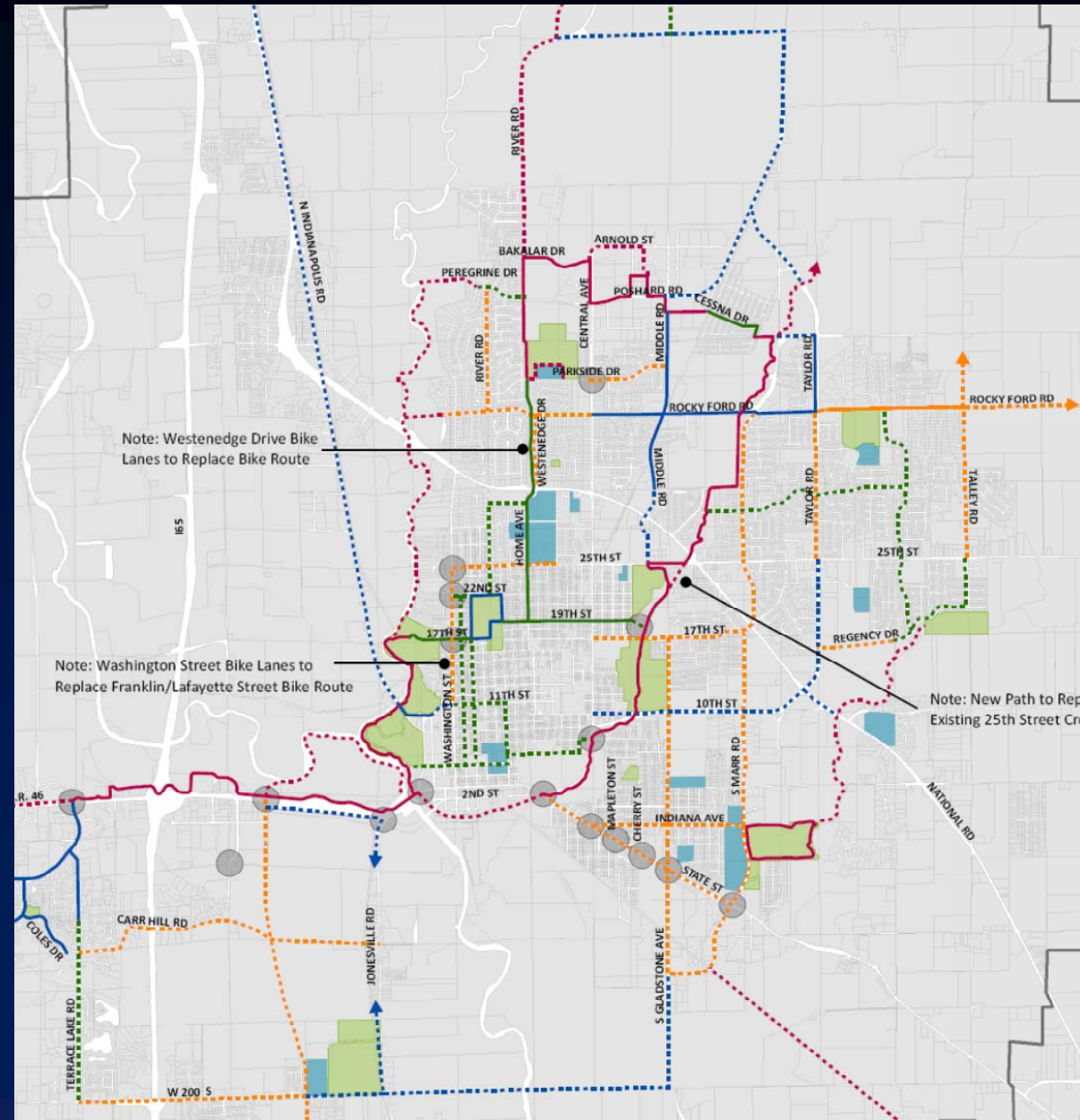
3. Support a comprehensive network of *transportation* trails.

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



E.g. Columbus, IN Bicycle & Pedestrian Plan

Voted into community Comprehensive Plan.



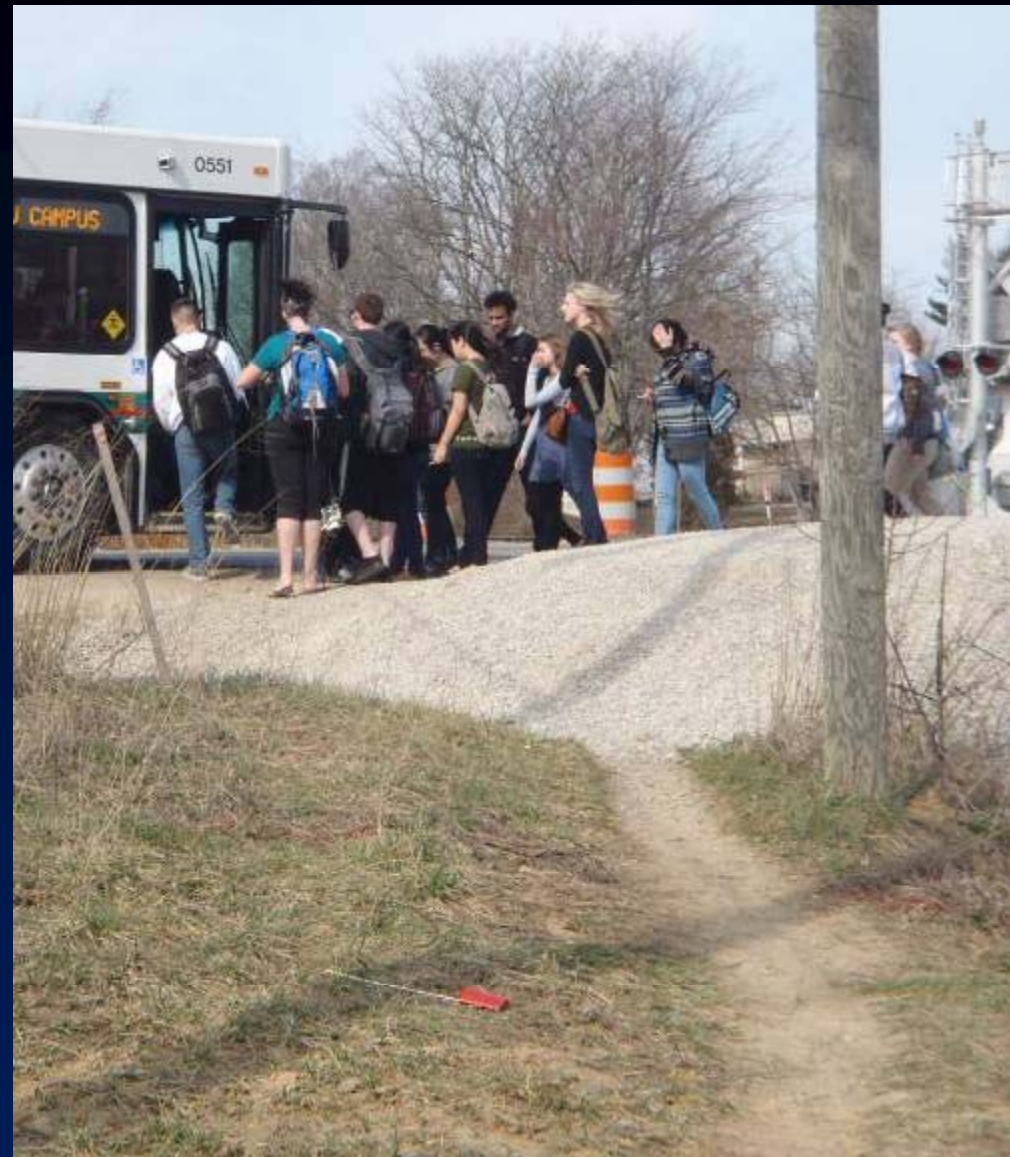
Columbus, Indiana Bicycle & Pedestrian Plan



An Element of the
City of Columbus
Comprehensive Plan

Adopted: Month DD, YYYY

Launch a 'goat trail' committee



4. Work for a bicycle- & transit-friendly community.

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



Charlotte's bike share



Blue Island, IL.

www.bikeleague.org

www.markfenton.com

The High Cost of Free Parking

D. Shoupe



**Boise Bicycle Project –
skills, maintenance, . . .**



- Student, faculty IDs as transit passes.
- Predictable \$ to VRT (for upgrades?)



5. Safe Routes to School – more than just an encouragement program!

- All 5 E's: **Engineer** bike lanes, racks, sidewalks; **educate & encourage** walk/bike groups; **enforce** proper speeds.
- Measure BMI? Must **evaluate** how kids get to school (walk, bike, bus, car) and why . . . !

www.saferoutesinfo.org



Is this you?

www.markfenton.com



What did the kids think? The ENVIRONMENT

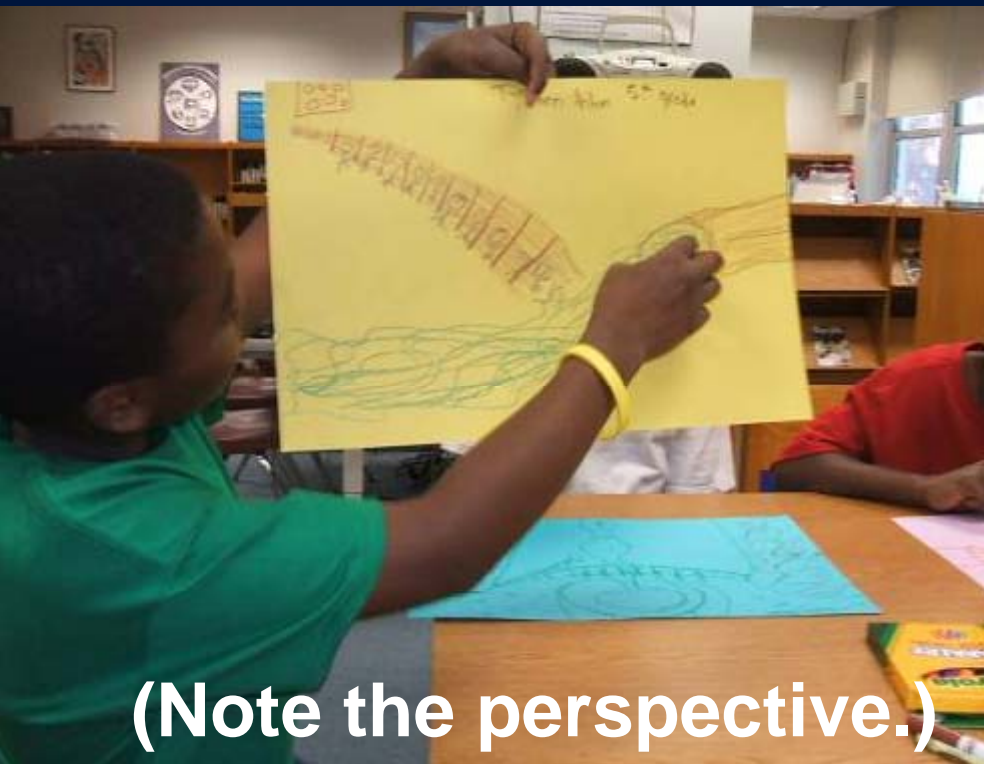
- “I had to walk with my little brother to keep him out of trouble . . .” (Ciairah)



- “We saw a dog across the creek, in the trees . . .” (Jarrette)

What did the kids think? FUN.

- “This is Tyshion falling in the water off of the bridge . . .” (Khalil)



(Note the perspective.)



- “This is the pipe the water comes out of, and this is Khalil falling in the water . . .” (Tyshion)



Recommendations:

- Do this all the time, not just as an “event.”
- Improve the trail through the park.
- Plant a garden, trees along the way.
- **5 minute safety delay** on cars at dismissal.

www.saferoutespartnership.org

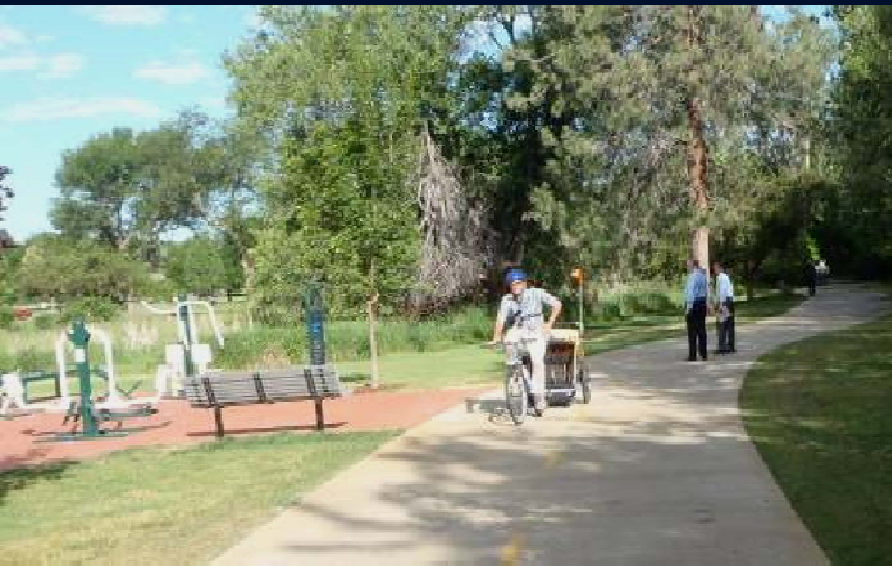
www.saferoutesinfo.org

www.markfenton.com

Why care about stickier communities for active living?

- The **inactivity** epidemic; **our kids may pay!**
- **~4,000** pedestrian, **~40,000** motor vehicle, **~400,000** sedentary-related deaths/year.
- **Carbon footprint**, air quality.
- Failing **transport infrastructure**; hour+ commute time/day, traffic congestion & costs.
- Dependence on **foreign oil**; **wars** in Mid-east.
- More eyes on the street, **less crime**.
- **Businesses** wishing to **locate in livable communities**; housing values.

**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 friend along.**



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

