# Smart Growth 101: Making the Connections

Paul Zykofsky, AICP, Assoc. AIA Associate Director Local Government Commission

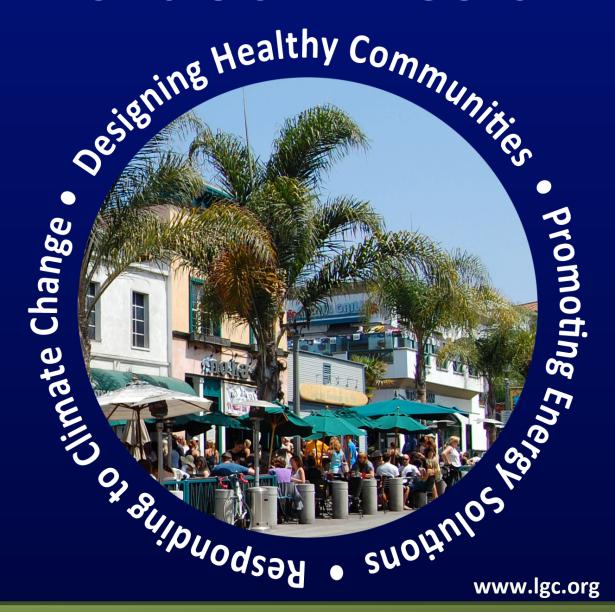
New Partners for Smart Growth Conference

Baltimore, MD January 28, 2015

## **Local Government Commission**

We are a nonprofit organization that fosters innovation in local environmental sustainability, economic prosperity and social equity.





### What we do...

The LGC helps transform communities through *inspiration*, *practical assistance* and a *network* of visionary local elected officials and other community leaders.

### How we do it...

- ✓ Workshops and Trainings
- ✓ Participatory Planning and Design Work
- ✓ Policy Development Assistance
- ✓ Tours of Model Projects
- ✓ Networking Events
- ✓ Conferences





### **LGC Board Members**

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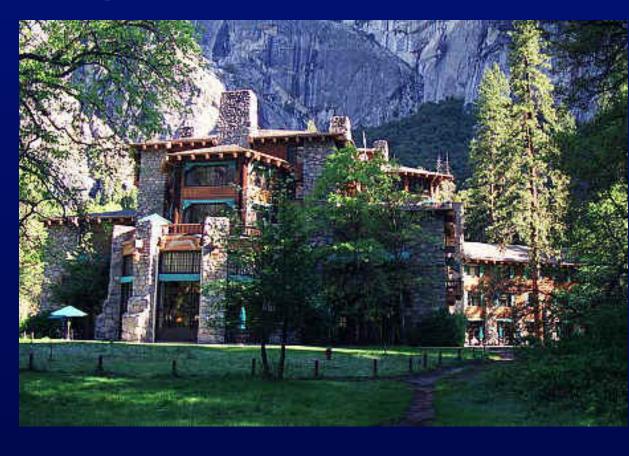
City of Arcata





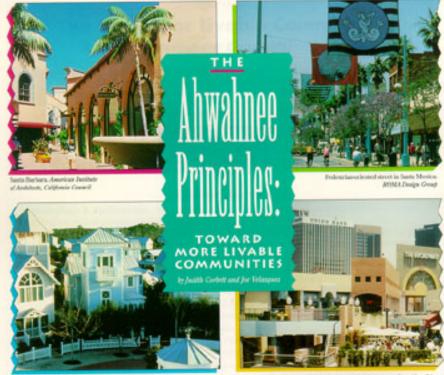
## The Ahwahnee Principles, 1991

- Response to our members' concerns over sprawling, poorly planned development in their communities
- Assembled with assistance from leading architects and planners working on innovative solutions



# The Ahwahnee Principles, 1991

- Revitalize existing parts of our communities through infill development
- Plan complete and integrated communities with mix of uses
  - Within walking distance of one another
  - Within walking distance of transit stops
  - With a diversity of housing types
  - With a center focus



Novida. EPT architects

Horton Plans - Where the snall was sited downtown. City of Sen Diego

ities everywhere are facing similar problems – increasing traffic congestion and worsening air pollution, the continuing loss of open space, the seed for costly improvements to road and public services, the inequitable distribution of economic resources, and the loss of a sense of community. The problems seem overwhelming and we suffer from their consequences every day. City character is blurred until every place becomes like every other place, and all adding up to No Place.

Many of our social, economic and ensirormental problems can be traced to land use practices adopted since World War II. In the late 1940s we began to adopt a notion that life would be better and we would all have more freedom if we planned and built our communistics around the automobile. Gradually, rather than increasing our freedom, auto-oriented land use planning has reduced our options. New, it takes much more time thus it word to carry out our daily activities. We must go everywhere by car - there is no other option. We must take a car to the store for a pallon of milk, drive the children to Little League practice, even seen I part of the hunch hour driving to a place to eat. And services further from our home, we spend our time as menymous individuals waiting for the traffic light to change rather than charting with friends at the current store or phying ball on the lown with the neighborhood kids.

LEAGUE OF CALIFORNIA CITIES



## What is the Purpose of Towns and Cities?



Cities are an invention to maximize exchange (goods, culture, friendship, knowledge) and to minimize travel.

The role of transport is to maximize exchange.



## How have we built our urban roadway system?











## Will 23 lanes be enough?

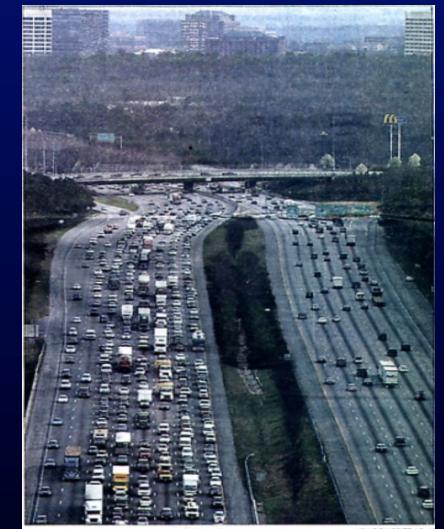
Proposal would put I-75 among country's biggest

By ARIEL HART ahart@ajc.com

It's wider than an aircraft carrier. Far wider than the carving on Stone Mountain, Wider than the White House stretched end to end, twice.

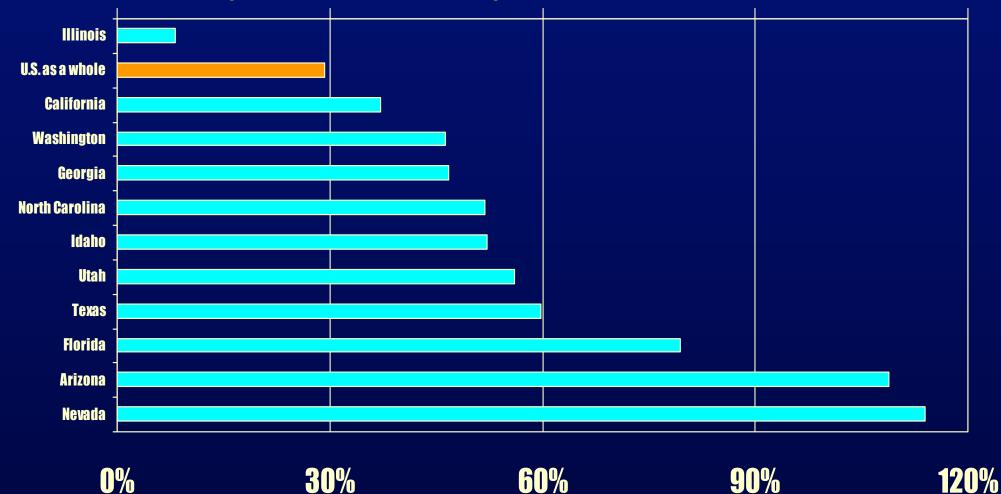
It's the planned I-75, all 23 lanes, coming soon to Cobb County. As currently conceived it's 388 feet across, wider than a football field is long.

23 LANES: The state Department of Transportation is planning to expand I-75 (below) and I-575 in Cobb and Cherokee counties. The 23-lane stretch would be between Delk and Windy Hill roads on I-75. Truck General purpose lanes **HOV lanes** General purpose lanes Truck lanes lanes Northbound Southbound Trucks Car/van pools and buses ride for free. Single-occupant vehicles pay toll. must pay. Cost rises when traffic is heavier.



Traffic heads north on I-75, just north of I-285, on Thursday, A proposal for the interstate is enough to make a road builder weep with joy, and make others wonder whether it's overkill.

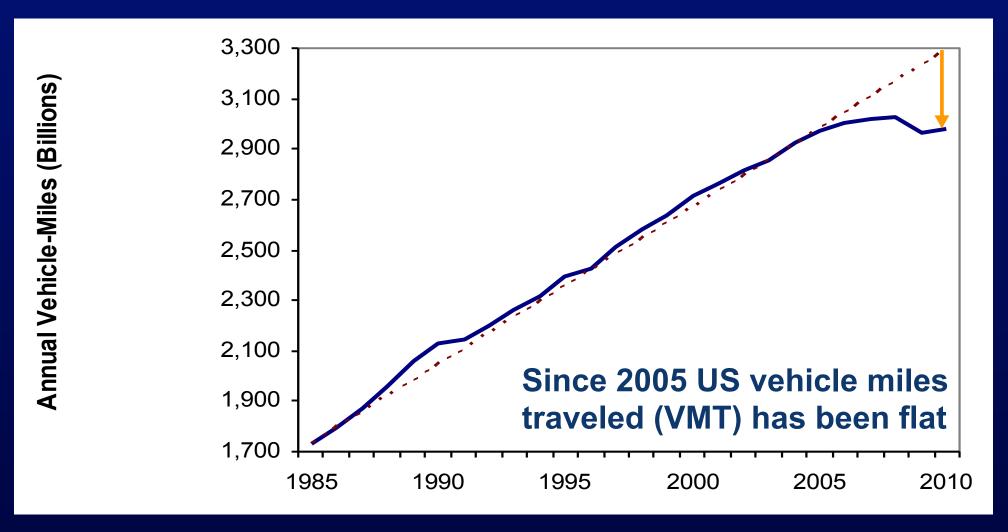
# Projected Population Growth Rates in the U.S. (2000-2030)





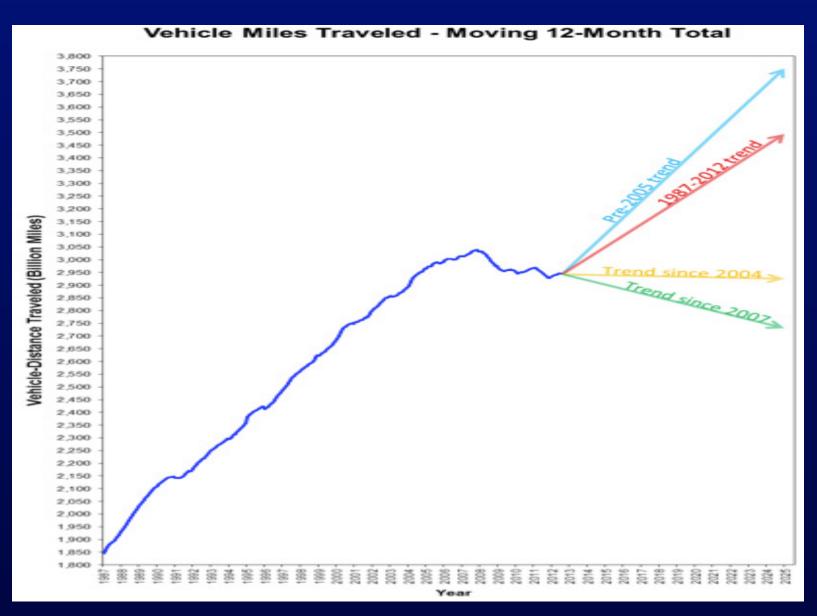
Source: U.S. Dept. of Commerce, Census Bureau www.lgc.org

# Will traffic volumes always increase? Maybe not



Since 2005 US Vehicle Miles Traveled (VMT) has been flat

## Future VMT trends are unknown



## Smart Growth/Livable Communities

#### Common Themes

- Efficient use of land
  - Fill in older parts of communities before spreading out
  - Build new communities in more compact way
- Mix of uses
  - Mix commercial and retail uses with residential
  - Support/create town and neighborhood centers
  - More destinations in walking/bicycling distance
- Support walking, bicycling and transit use
- Create strong local and regional economies
- Involve residents in planning process







## **Economic Benefits of Smart Growth**

"Just as companies now compete on quality, communities will too."

— Collaborative Economics, Linking the New Economy to the Livable Community

"Livability isn't some middle class luxury. It is an economic imperative."

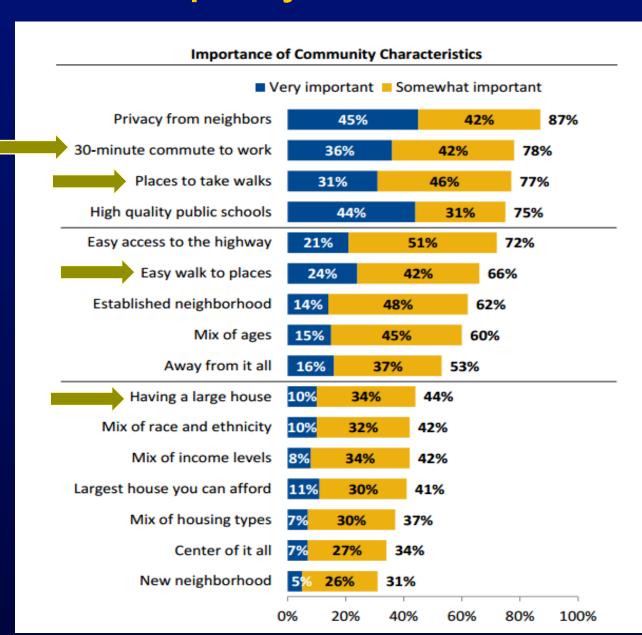
— Robert Solow, Nobel Prize-winning Economist



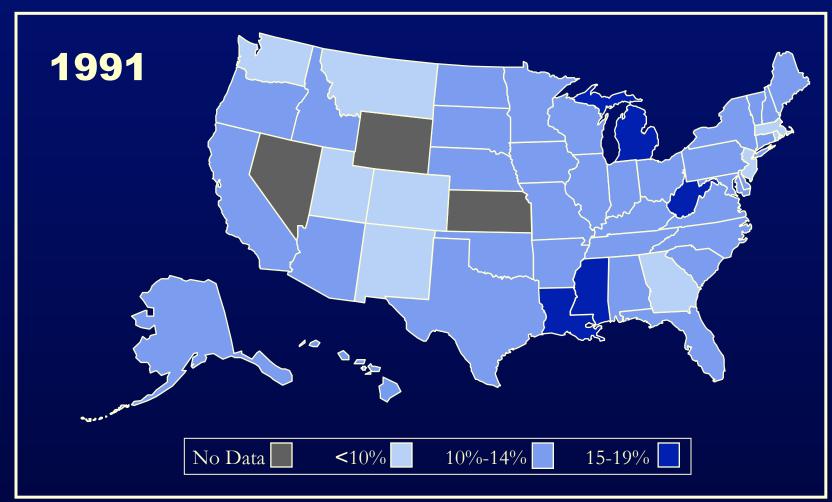
## Economic Benefits: Property Values

- 78%: 30-minute commute to work
- 77%: Places to take walks (sidewalks, parks, trails)
- 66%: Easy walk to places (schools, stores, restaurants)
- 44%: Having a large house

Source: "Community Preferences Survey" by National Association of Realtors, 2011



## Obesity\* Trends Among U.S. Adults



\* BMI ≥ 30, or ~ 30 lbs overweight for 5' 4" woman

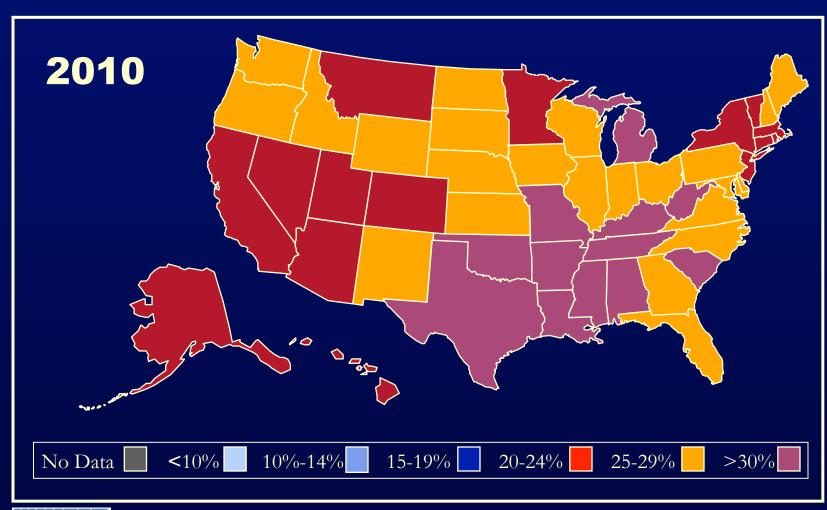


Source: Behavioral Risk Factor Surveillance System, CDC Source: Mokdad A H, et al. JAMA 2003;289:1

## Obesity\* Trends Among U.S. Adults

Counties with obesity levels over 30% in 2008 included: Merced, San Joaquin, Stanislaus, Tulare and Yuba

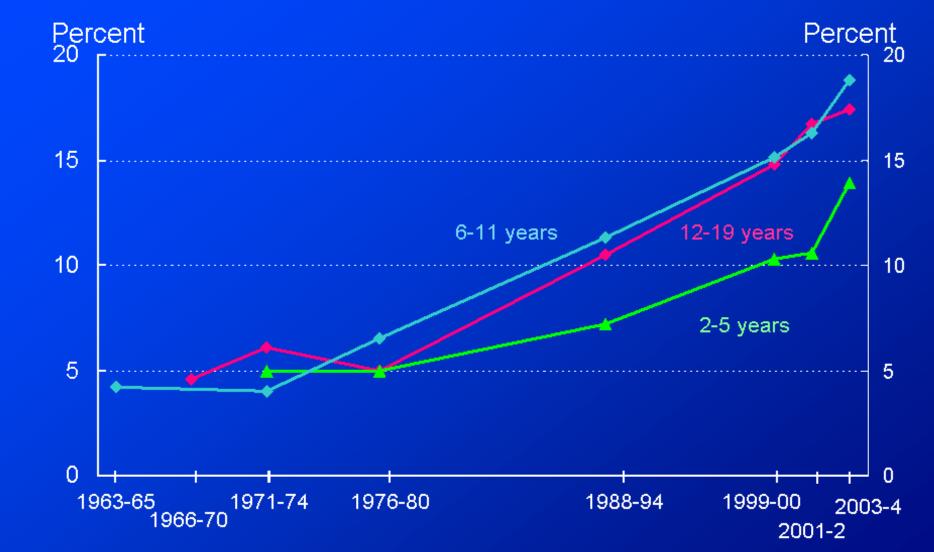
\* BMI ≥ 30, or ~ 30 lbs overweight for 5' 4" woman





Source: Behavioral Risk Factor Surveillance System, CDC Source: Mokdad A H, et al. JAMA 2003;289:1

## Trends in Child and Adolescent Overweight



Note: Overweight is defined as BMI >= gender- and weight-specific 95th percentile from the 2000 CDC Growth Charts. Source: National Health Examination Surveys II (ages 6-11) and III (ages 12-17), National Health and Nutrition Examination Surveys I, II, III and 1999-2004, NCHS, CDC.

# Newswes

It Strikes 16 Million Americans

Are You

computer drawing of a human insulin molecule

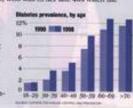
#### SOCIETY

## An American **Epidemic**

The silent killer: Scientific research shows a 'persistent explosion' of casesespecially among those in their prime BY JERRY ADLER AND CLAUDIA KALB

OMETHING TERRIBLE WAS HAPPENING TO YOLANDA BENTTEZ'S eyes. They were being poisoned; the fragile capillaries of the retina attacked from within and were leaking blood. The first symptoms were red lines, appearing vertically across her field of vision; the lines multiplied and merged into a haze that shut out light entirely. "Her blood vessels inside her eye were popping," says her daughter, Jannette Roman, a Chicago college student. Benitez, who was in her late 40s when the

problem began four years ago, was a cleaning woman, but she's had to stop working. After five surgeries, she has ergained vision in one eye, but the other is completely useless. A few weeks ago, awakening one night. in a hotel bedroom, she walked into a door, setting off a paroxysm of pain and nausea that hasn't let up yet. And what caused this catastrophe was nothing as eaotic as pesticides or emerging viruses. What was poison ing Benitez was sugar.



#### Heredity

Genes help determine whether you'll set diabetes. In many generations are struck. But beredity is not destinyespecially if you and well and exercise.

NAMES OF ROOM BROKES OFFE and Ramon, Barritou's reaths and two brothers sled from complications of the disease

SEVENEEL SEPTEMBER 4, 2000

## Diabetes Projected Risks: For Babies Born in 2000

- Girls: 38% lifetime risk
  - Latino girls: 53%
  - African-American girls: 49%
  - If diabetic before age 40, Lifespan shortened by 14 years (Quality of life by 19 years)
- Boys: 33% lifetime risk
  - Latino boys: 45%
  - African-American boys: 40%
  - If diabetic before age 40, Lifespan shortened by 12 years. (Quality of life by 22 years)

# CDC: Diabetes to afflict 1 in 3 born in 2000

Scientist says kids must eat healthier, exercise more

By JANET McCONNAUGHEY Associated Press

New Orleans — One in three U.S. children born in 2000 will become diabetic unless many more people start eating less and exercising more, a scientist with the Centers for Disease Control and Prevention warned Saturday.

The odds are worse for African-American and Latino children: Nearly half of them are likely to develop the disease, said Dr. K.M. Venkat Narayan, a diabetes epidemiologist at the CDC.

"I think the fact that the diabetes epidemic has been raging has been well-known to us for several years. But looking at the risk in these terms was very shocking to us," Narayan said.

The 33 percent lifetime risk is about triple the American Diabetes Association's current estimate.

by 2050, to 29 million, an earlier CDC study by Narayan and others found.

"These estimates I am giving you now are probably quite conservative," Narayan said in an interview before the diabetes association's annual scientific meeting here.

Narayan said it would be difficult to say whether undiagnosed cases would rise at the same rate.

If they did, that could push the 2050 figure to 40 million or more.

Doctors had known for some time that Type 2 diabetes — what used to be called adultonset diabetes because it typically showed up in middle-aged people — is on the rise, and that patients are getting younger.

Nobody else had crunched the numbers to look at current odds of getting the disease, Narayan said.

Overall, he said, 39 percent of the girls who now are healthy 2½- to 3-year-olds and 33 percent of the boys are likely to develop diabetes, he said.

For Latino children, the odds are closer to one in two: 53 percent of the girls and 45 percent of the boys. The numbers are about 49 percent and 40 percent for African-American girls

## What Smart Growth "Is" And "Is Not"

Not against cars and More transportation choices and less traffic roads Vibrant cities, suburbs Not anti-suburban and towns Not about telling people Wider variety of housing where or how to live choices **Not** against growth Well-planned growth that improves quality of life

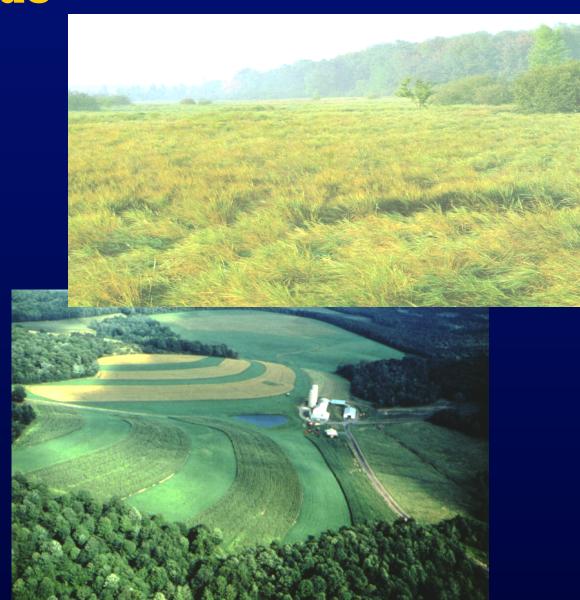
## Principles of Smart Growth/ Livable Communities

## Ten Principles of Smart Growth

- Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas
- Strengthen and Direct Development Towards Existing Communities
- 3. Take Advantage of Compact Building Design
- 4. Mix Land Uses
- 5. Create Range of Housing Opportunities and Choices
- 6. Provide a Variety of Transportation Choices
- 7. Create Walkable Neighborhoods
- 8. Foster Distinctive, Attractive Communities with a Strong Sense of Place
- 9. Encourage Community and Stakeholder Collaboration
- 10. Make Development Decisions Predictable, Fair and Cost Effective

# 1. Preserve open space, farmland, and critical environmental areas

- Identify areas with highest priority for preservation
- Use a variety of preservation tools, including purchase, regulatory, and incentive programs



## Sprawl in the Atlanta Region

- 1973-1992 forest land was reduced by 15 percent and grassland and cropland by about 6 percent
- The Georgia Conservancy estimates that 27 acres of tree cover are lost in the region every day
- Without transit-supportive and higher-density land use patterns, the Conservancy estimates that 200,000 acres of tree cover will be lost by 2020



## Charlantingham: Welcome to the big city

By Maurice Tamman mtamman@ajc.com

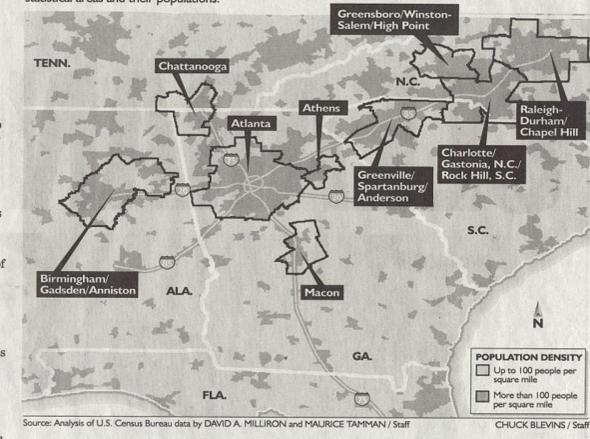
Charlotte — Over the past 40 years, satellite lenses have clicked away, 450 miles high, capturing the nation's night lights.

In the 1970s, those lenses detected only a few blips from Georgia, Alabama, Tennessee, and the Carolinas. Today, the region glows like a wheel-shaped constellation, with Atlanta at its hub. During that time, me grown from 1.39 millio five counties to 4.11 mi counties; it pushes out 20, 75 and 85 toward B tanooga, Macon, Green Charlotte. All the while markets boomed, exter aries toward Atlanta.

According to the 200 lion people live in the r Piedmont megalopolis,

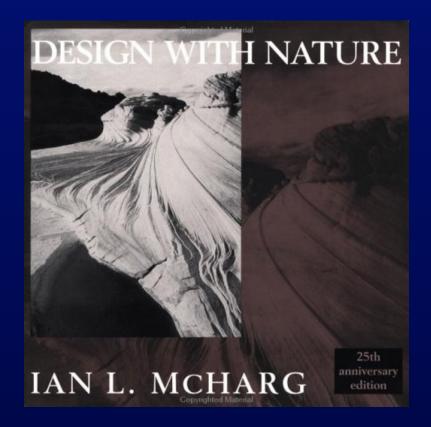
#### PIEDMONT MEGALOPOLIS

Atlanta is the hub of what has been called the Piedmont megalopolis, stretching along I-20, I-75 and I-85 from Birmingham to Greenville, S.C., Charlotte and even Raleigh and from Chattanooga to Macon. This shows how the areas are growing together as people move to areas along the interstates. A look at those metropolitan statistical areas and their populations:



Atlanta Journal-Constitution, April 15, 2001

# Analyze where you can accommodate future growth



Mapping Method
Developed by Ian McHarg

Geology



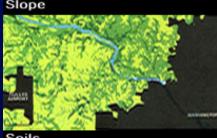
Geolog



Hydrology



Slope



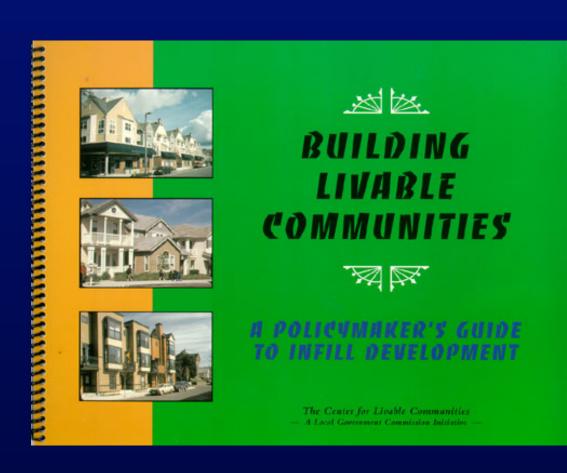
Soils



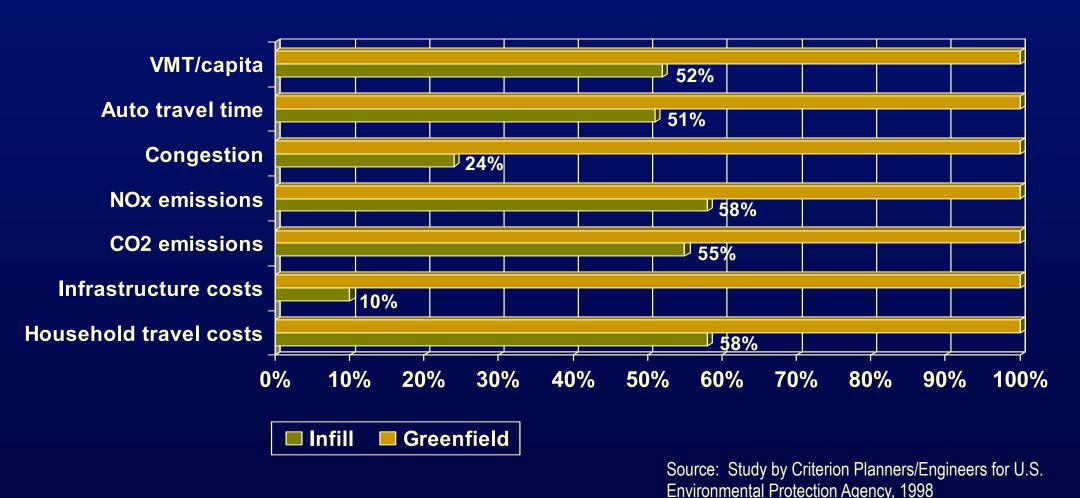
Woodland

# 2. Strengthen, and direct development towards, existing communities

- Use incentives to achieve clean-up and re-use of "brownfield" and "grayfield" sites
- Preserve and repair historic buildings as part of redevelopment plans
- Build on the resources and amenities of existing communities



## Impacts of Infill vs. Greenfield Development in the San Diego Region



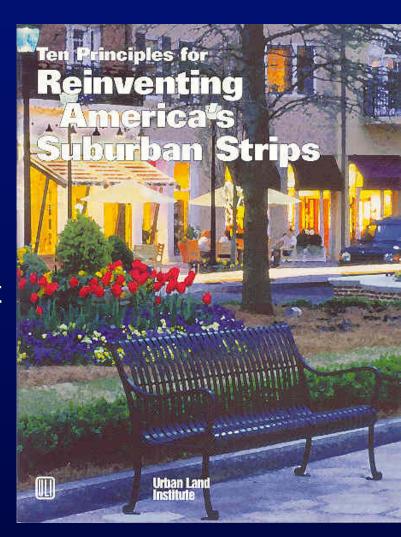
## Potential benefits of infill

- Revitalize town centers, neighborhoods
- Provide more housing options
- Support transit service
- More efficient use of land
- Reduced costs for infrastructure/services
- Preserve agriculture
- Conserve open space



## Commercial Strips — The Next Frontier

- ULI's Principles to Reinvent Suburban Strips
  - Ignite Leadership/Nurture Partnership
  - Anticipate Evolution
  - Know The Market
  - Prune Back Retail-Zoned Land
  - Establish Pulse Nodes of Development
  - Tame the Traffic
  - Create the Place
  - Diversify the Character
  - Eradicate the Ugliness
  - Put Your Money (and Regulations)Where Your Policy Is



## 3. Take advantage of compact building design

Grow vertically rather than horizontally to preserve green spaces and reduce cost of providing public facilities and services











#### Lower Cost of Infrastructure

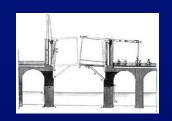
#### Low Density vs. Compact Development

Land Consumption	45% more*
Cost for Roads	25% more**
Cost for Utilities	15% more**
Cost for Schools	5% more**
Other Costs	2% more**

\*Duncan, James et al, *The Search for Efficient Urban Growth Patterns*. Florida Department of Community Affairs, 1989.

\*\*Burchell, Robert, *Economic and Fiscal Impacts of Alternative Land Use Patterns*, Rutgers University, 1996.





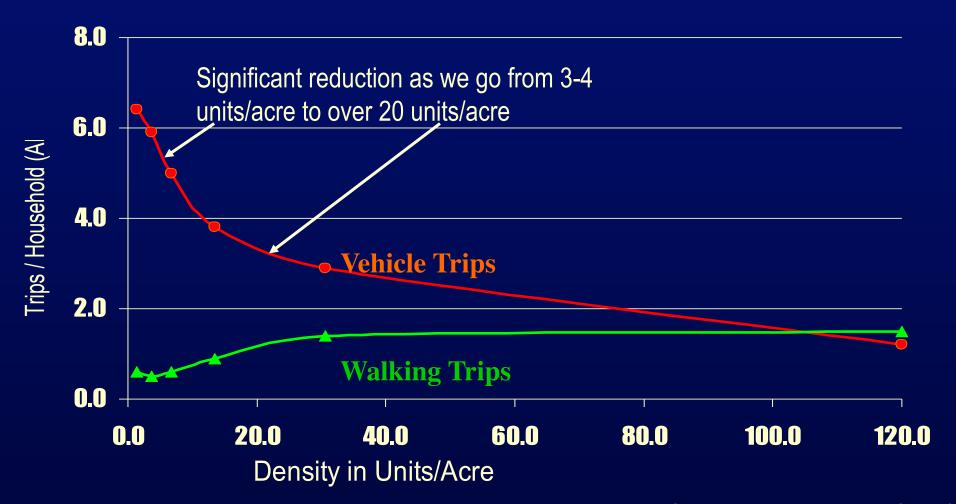
Public Interest Projects, Inc. Joseph Minicozzi, AICP Joem@pubintproj.com



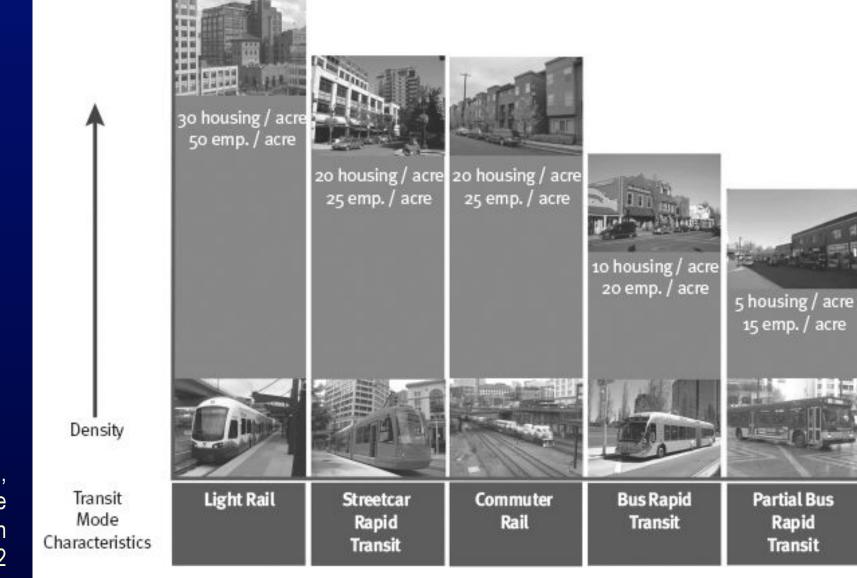


Land Consumed (Acres):	34.0	00.2
Total Property Taxes/Acre:	\$ 6,500	\$634,000
City Retail Taxes/Acre:	\$ 47,500	\$83,600
Residents per Acre:	0.0	90.0
Jobs per Acre:	5.9	73.7

## Land Use Pattern Affects Travel — Higher Density can reduce Vehicle Trips



## Land Use Pattern Affects Travel — Density to Support Transit



Source: Tumlin, Jeffery, Sustainable Transportation Planning, 2012

## Land Use Pattern Affects Travel — Density to Support Retail

For a 10,000 sq.ft.

Convenience Store

7 units/acre

For a 25,000 sq.ft. Small Supermarket

18 units/acre

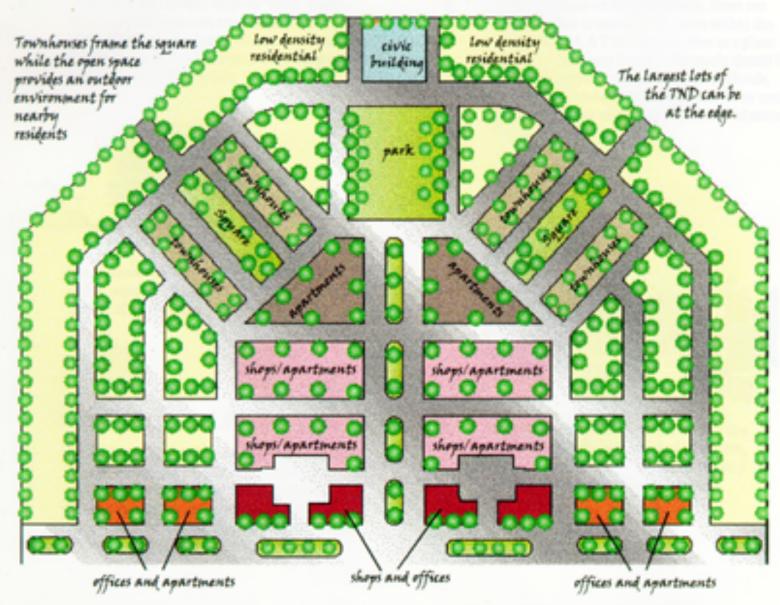


Civic buildings should be at the focal pint of a street or open space corridor.

# Compact Development in Appropriate Locations

Traditional
Neighborhood
Code

Knoxville, TN



The intensity of uses should gravitate away from the neighborhood center.

In those cases where a TND is bordered by an arterial street, higher intensity uses such as medium density housing can be used in creating the edge

In 1991 there were 31.8 million people over the age of 65 in the U.S.

By 2030 that number will increase to <u>66</u> million.



Demographic Trends: Increase in Elderly Population



Moving to downtowns and older neighborhoods

Driving less and looking for other transportation options.

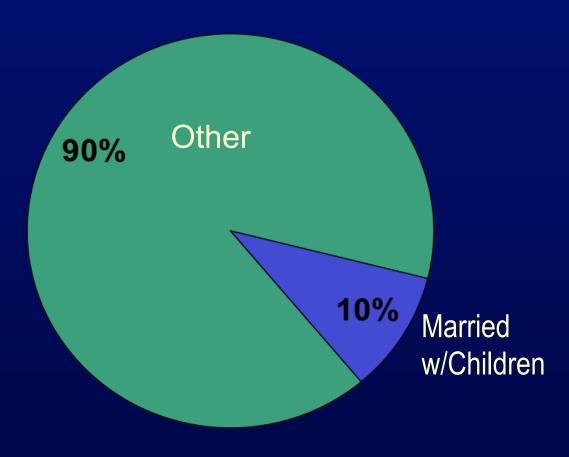


#### Demographic Trends: Millenials



## New U.S. Households Formed: 2005-2015

"The traditional family — married couples with children — is slowly declining in number, while households made up of single persons living alone, singles living together, and married couples without children are growing rapidly. These three groups will account for 90 percent of the net new household growth projected in this decade, according to U.S. Census Bureau figures.



Peter Slavin, "The Rise of the Nontraditional Household," Multifamily Trends, Urban Land Institute, Summer 2005.

#### Tremendous Opportunity?

- By 2025 demand for attached and smalllot housing will exceed current supply by 35 million units (71%)
- Demand for compact housing will fall short of current supply

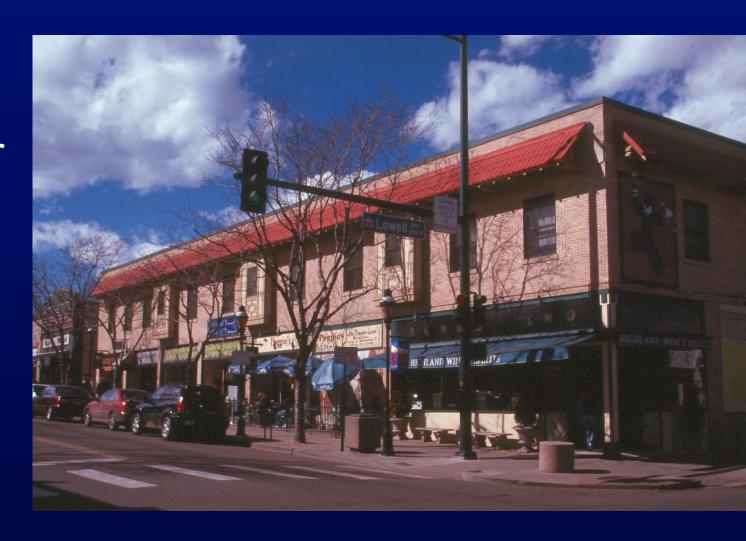
Source: Arthur C. Nelson, "Leadership in a New Era," Journal of the American Planning Association, Fall 2006



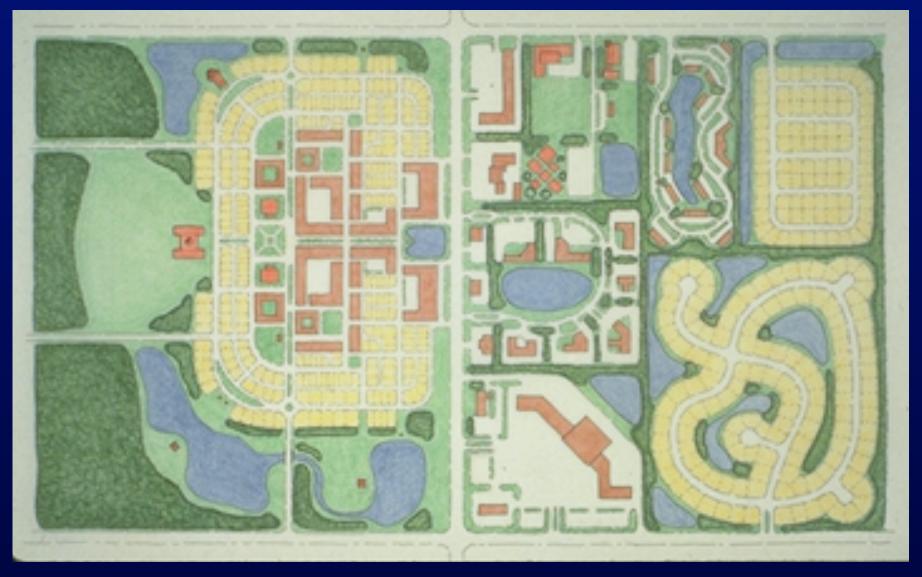
Vol. 72, Issue 4, 2006, pp. 393-407.

#### 4. Mix land uses

- Provide retail or personal services near housing
- Incorporate parks, schools, and other public facilities



#### Alternative Patterns of Development





**Housing over retail shops** 

Sacramento, CA





#### 5. Provide housing opportunities and choices

Provide quality housing for people of all income levels, household sizes, and stages in the life cycle.





Mixed Income Housing

Redwood City, CA



**Live-Work Units** 

Little Italy, San Diego, CA



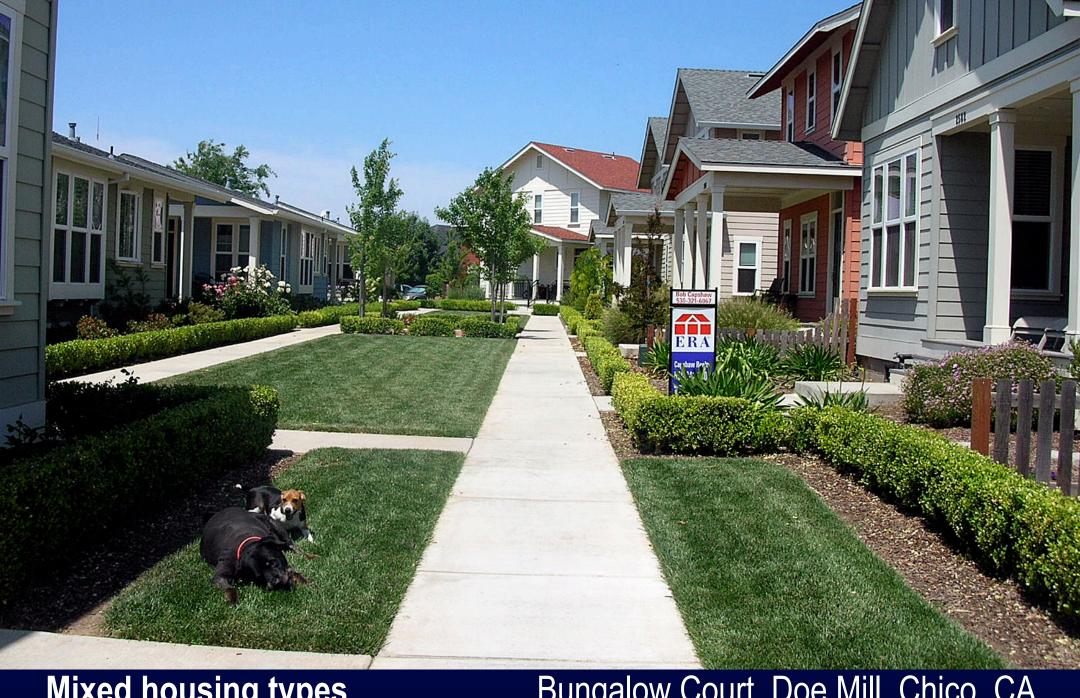
Mixed housing types

Fourplex, Doe Mill, Chico, CA



Mixed housing types

Fourplex, Doe Mill, Chico, CA



Mixed housing types

Bungalow Court, Doe Mill, Chico, CA





#### 6. Provide a variety of transportation choices

- Coordinate land use and transportation investment
- Increase high-quality transit service
- Connect pedestrian,
   bike, transit, and
   road facilities







**Transit-Oriented Development** 

San Diego, CA



Portland, Oregon Streetcar



#### **Portland Bus Mall**



#### **Los Angeles Metro Rapid Bus**



#### **Mexico City Metrobus**



Local Government Commission







Paris, France — Bus Rapid Transit

#### Bicycle Share Programs















Cycletracks — New York City

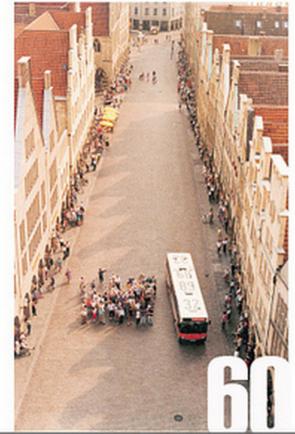
### STREET SPACE FOR 60 PEOPLE







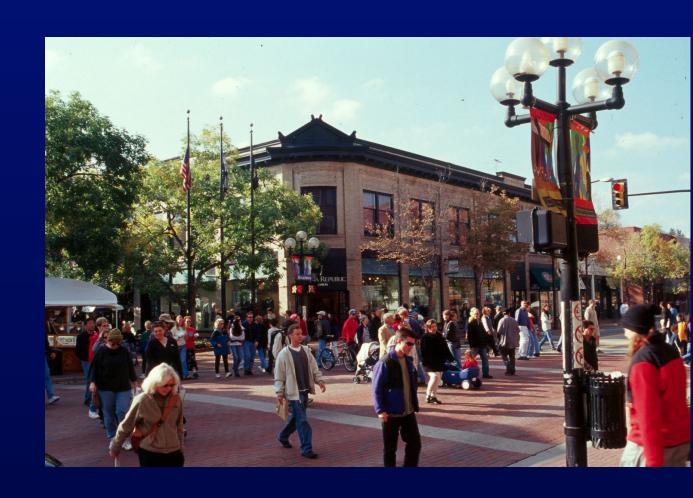


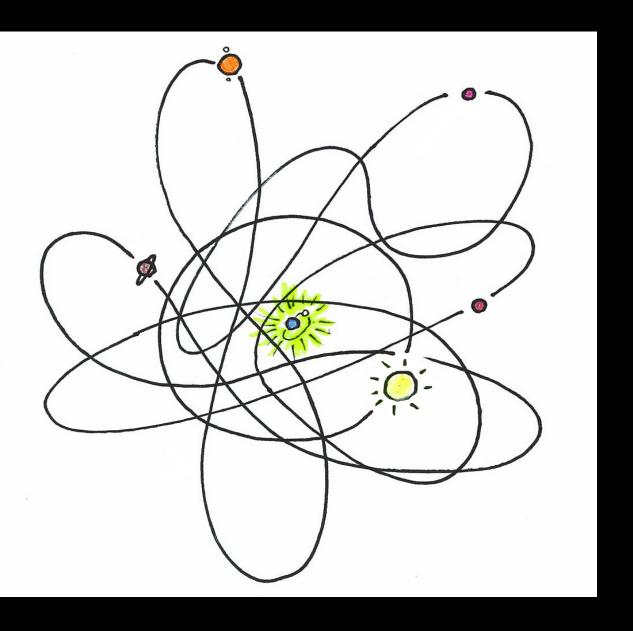




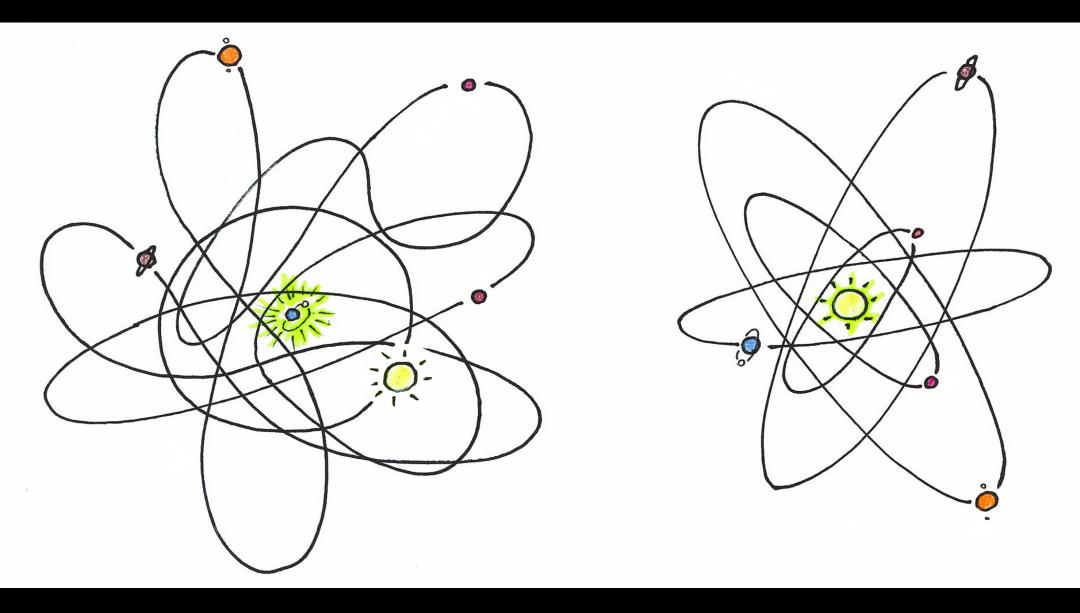
### 7. Create walkable communities

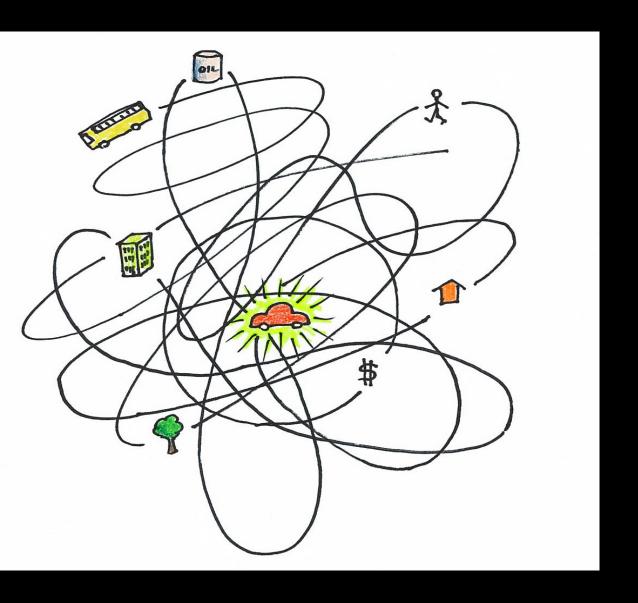
- Mix land uses, build compactly, and provide safe and inviting pedestrian corridors
- Create "complete streets"
  - Accommodate pedestrians, bicyclists, transit users

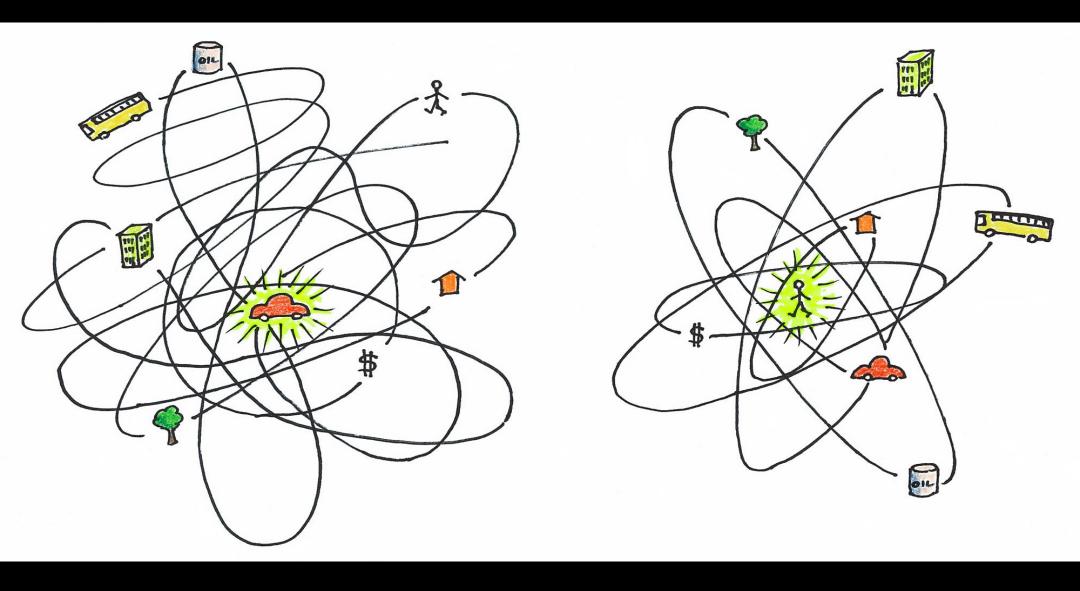




Courtesy of traffic engineer Ian Lockwood







What's the first thing a child wants to do and the last thing an older person wants to give up?











Victoria, British Columbia

"People are happiest when there are a lot of other people around..."

Dan Burden,Blue Zones

## The tremendous potential

Of all trips:

50%

are less than 3 miles

28%

are less than 1 mile



of these trips...

60%

are driven



National Household Travel Survey (2009)

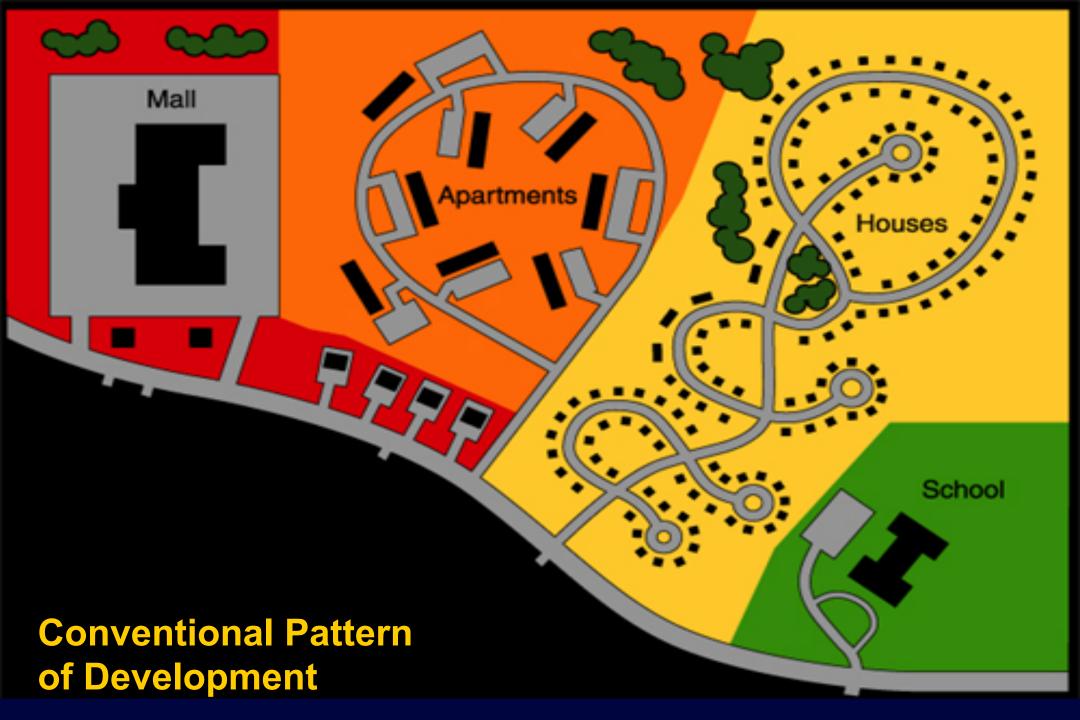


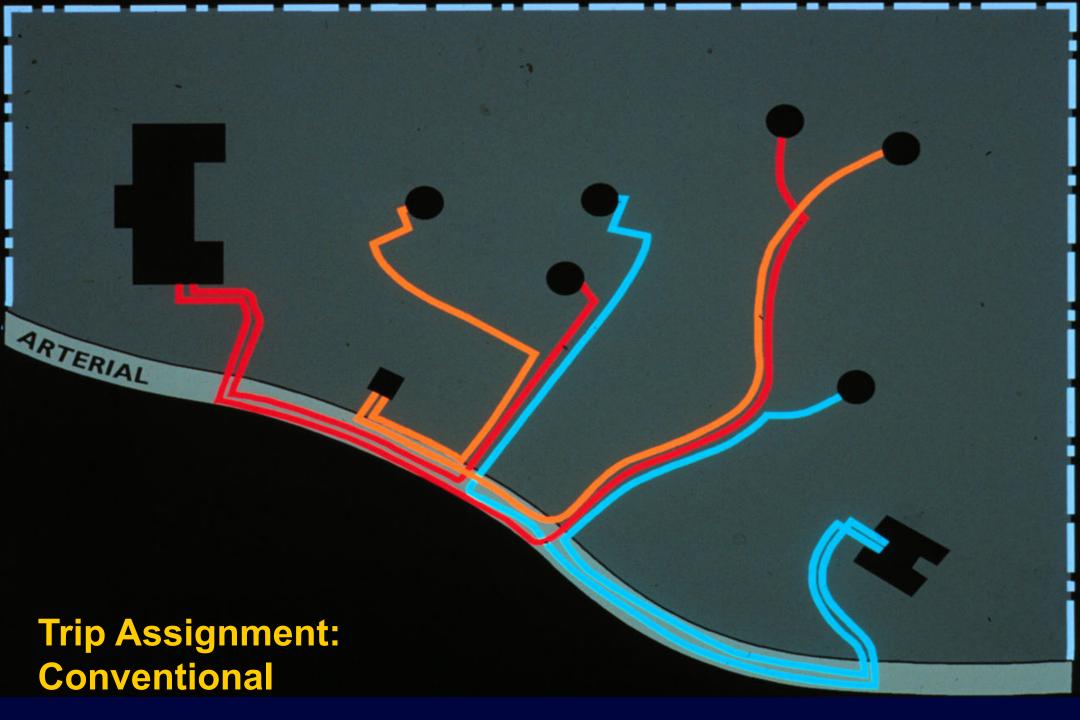


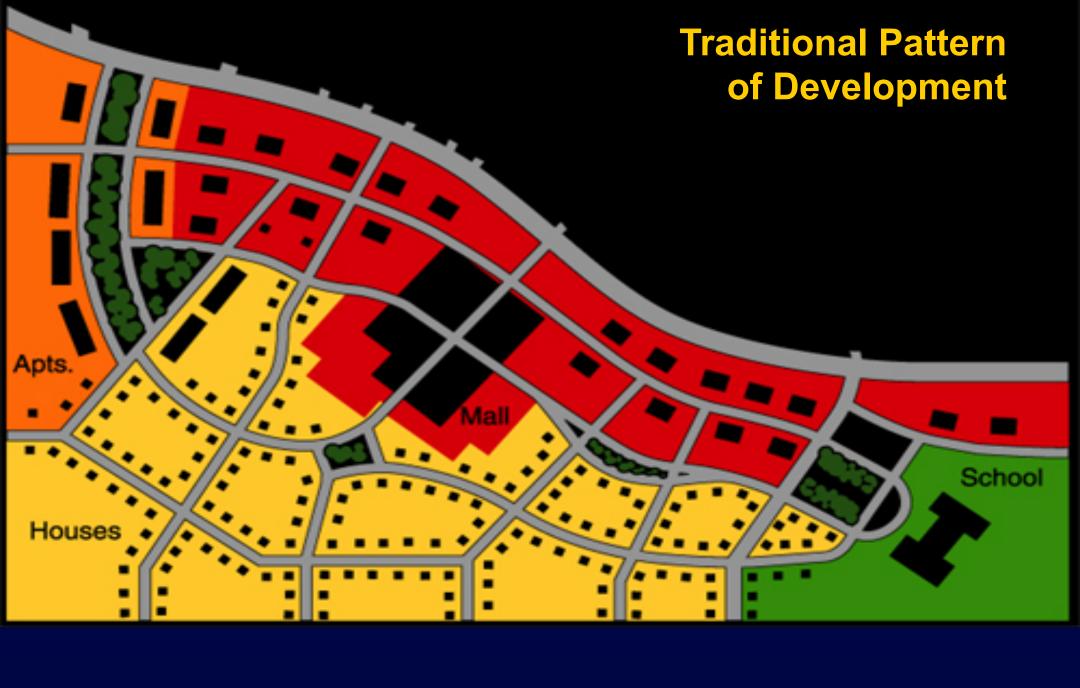
## Street Design

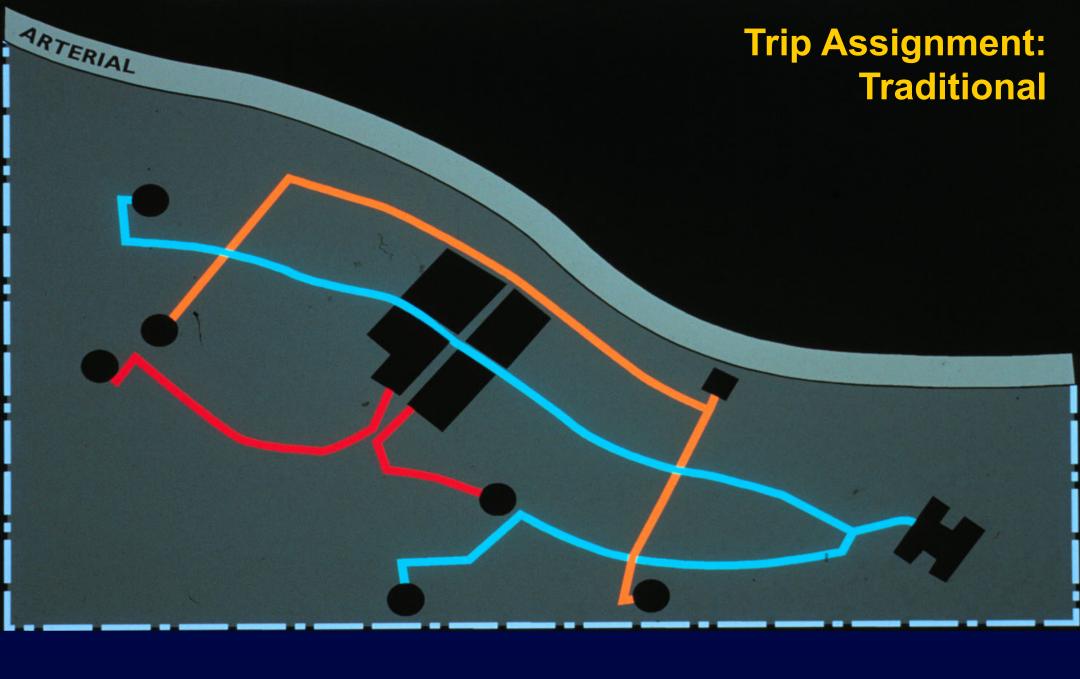
- Influences trip choices
  - Safe, quiet, slow, shaded streets encourage people to walk, ride bicycle or take transit instead of driving a car





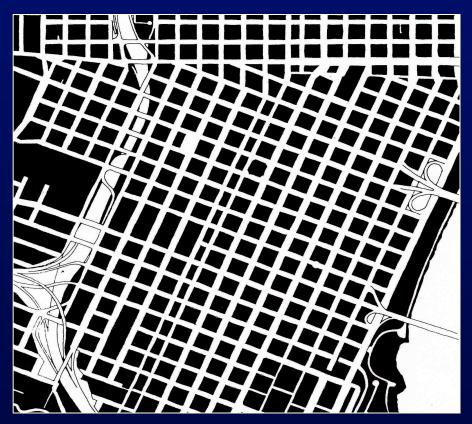


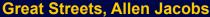




### Traditional vs. Conventional

Central Business Districts at the same scale







**Great Streets, Allen Jacobs** 

Portland, Oregon

Walnut Creek, California

#### CALIFORNIA CITY COMPARISON Safer **Less Safe** Cities Cities **Population** 59,845 65,719 **Population** 2,673 per sq. mi. 5,736 per sq. mi. Density Intersection 63 per sq. mi. per sq. mi Density **Mode Share** 84.1% 95.8% Driving 1.7% 5.4% Walking 0.7% 4.1% **Biking** 6.6% 1.7% **Transit** Road **Fatalities** per 100,000 population

Courtesy: Wesley E. Marshall, Ph.D., P.E., and Norman W. Garrick, Ph.D., "Street Network Types and Road Safety: A Study of 24 California Cities"

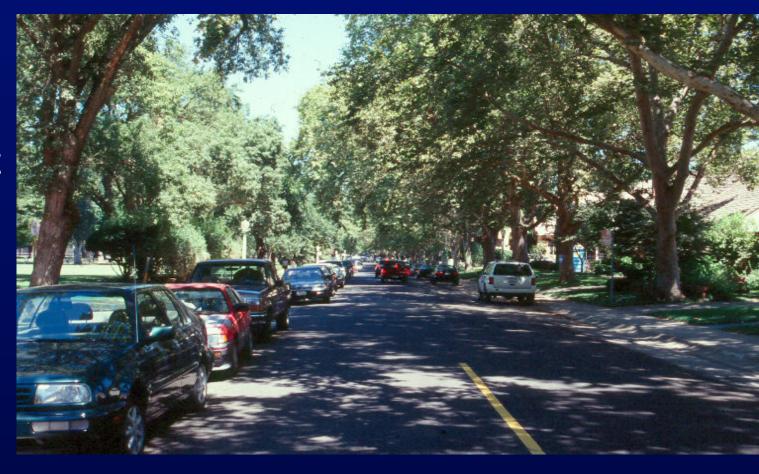
Principles of Safe, Walkable Streets

- CompleteStreetsdesigned for people, not just cars
- Friendly to cars, pedestrians and cyclists



### Principles of Safe, Walkable Streets

- Streetsdesigned sodrivers feelcomfortable atslow speeds
  - 15-25 mph on neighborhood streets
  - 25-35 mph on avenues and boulevards



### Principles of Safe, Walkable Streets

- Narrower streets are slower and safer
  - Longmont, CO study of 20,000 accidents
    - Found street width had the greatest relationship to injury accidents
  - Accidents/mile/year were higher on wider streets

40-foot wide street2.23 a/m/y

36-foot wide street1.21 a/m/y

24-foot wide street0.32 a/m/y

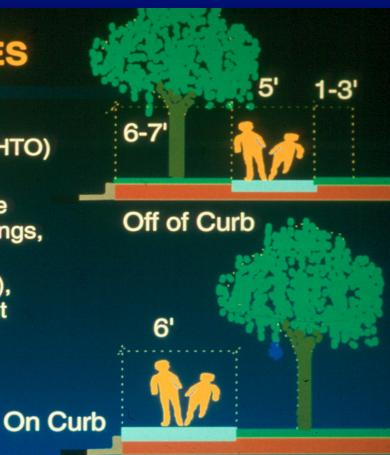
Source: "Residential Street Typology and Injury Accident Frequency," Swift and Associates, Longmont, CO, 1997

### Safe Streets Need Good Sidewalks

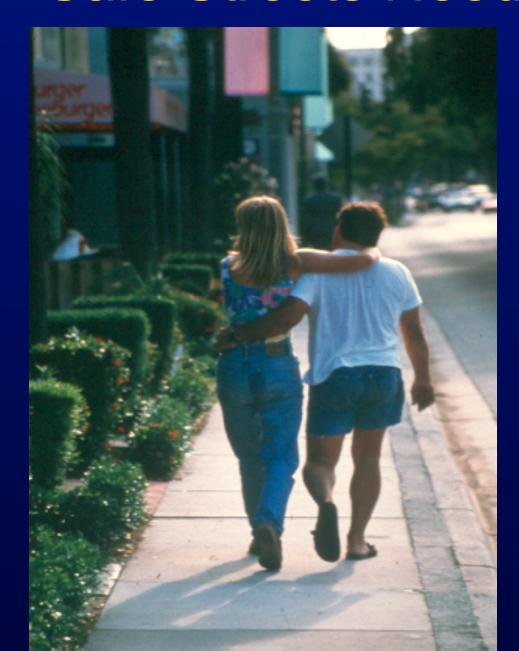
- Detached from curb
- At least 5 feet wide
- Planting strip helps shade street and sidewalk

#### SIDEWALK FEATURES

- Width (minimum 5'), ADA
- 6 feet if at back-of-curb (AASHTO)
- Crossfall 1:50
- Pedestrians need a 2 1001 wide buffer to all edges, curb, buildings, bridge railings etc.
- Buffer to motor vehicles (4-10'), nature-strip 7 feet wide to plant trees
- Street lighting, shade
- Pavers can be used for enhancement



## Safe Streets Need Good Sidewalks





# Healthy Neighborhoods Need Good Street Crossings

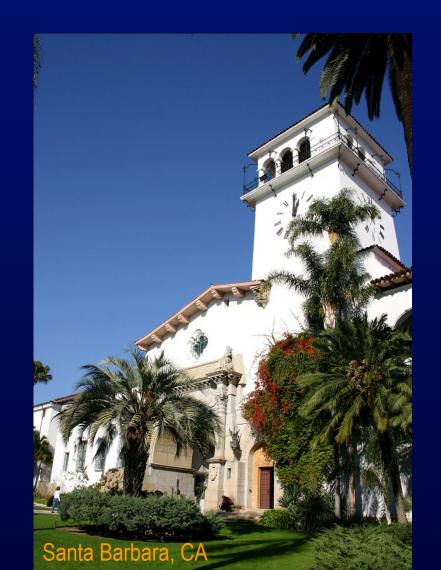


Parklets or plazas take underused street space to create people places, support local businesses



# 8. Foster Distinctive, Attractive Communities with a Strong Sense of Place







"There is little sense of having arrived anywhere, because everyplace looks like no place in particular."

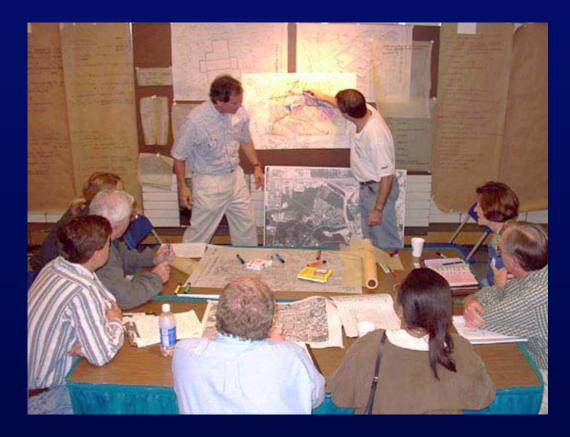
— James Howard Kunstler, The Geography of Nowhere





# 9. Encourage community and stakeholder collaboration in development decisions

The private sector does most of the development, but residents and other stakeholders collaborate in this process to ensure it is consistent with community needs and concerns.







Cutler-Orosi Design Charrette – Opening Night Workshop





Side Walk Finished 2 Reterior July 3. Stop zigo on Main Stop zigo



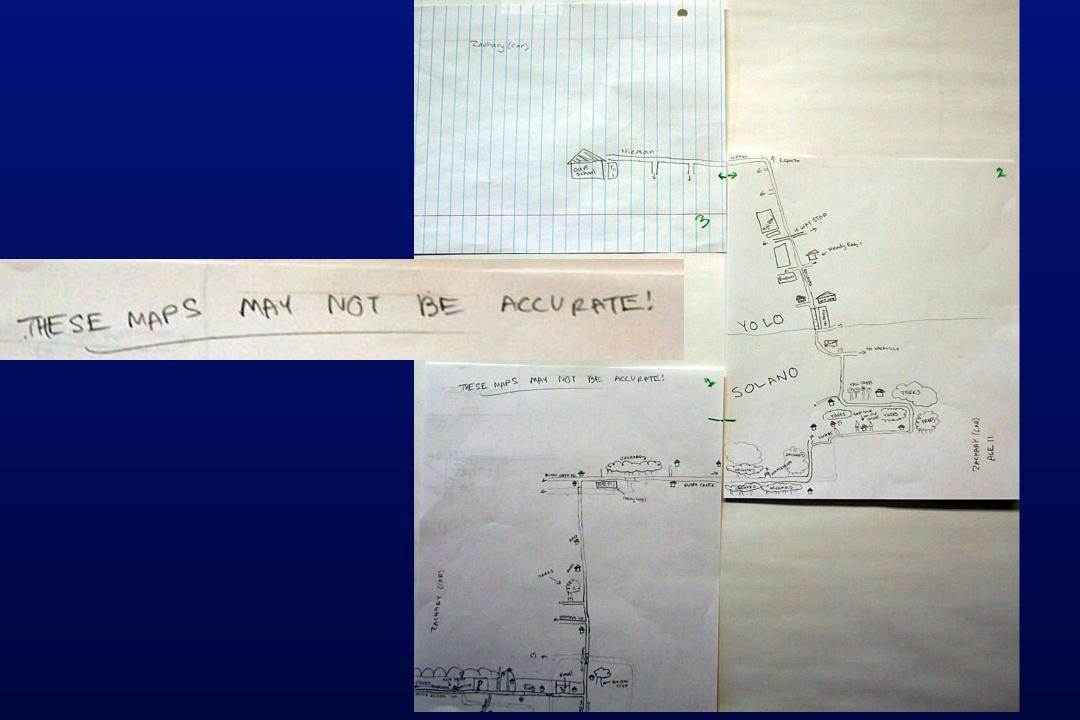




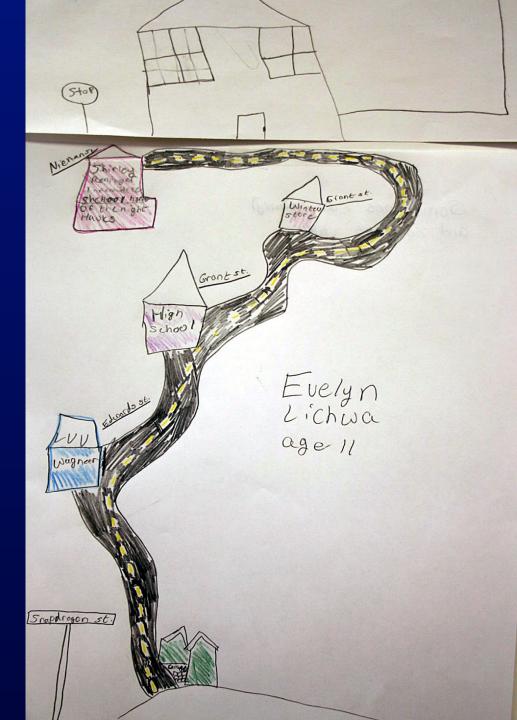












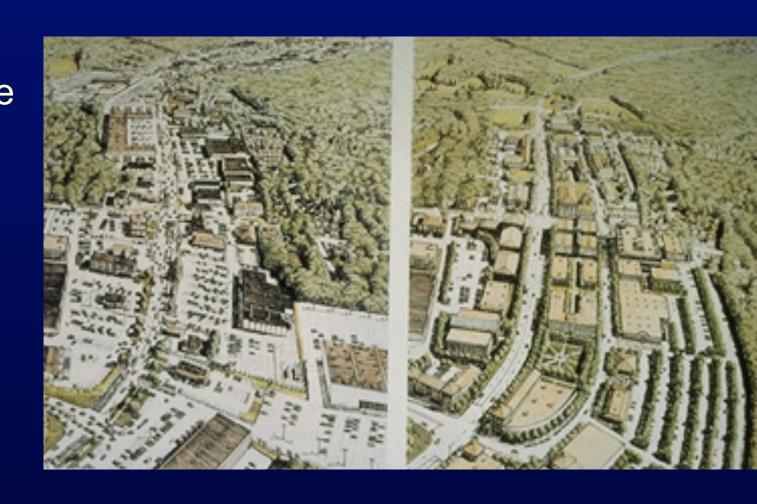
### Implementation – Public Participation is Key

- Get Better Plans
- Engage Residents in their Community
- Good Plans Survive Political Changes
- Way to insure that residents feel not that they have access to City Hall but that they own City Hall



# 10. Make development decisions predictable, fair and cost-effective

Update comprehensive plan and implementing regulations to incorporate Livable Communities, and apply regulations consistently

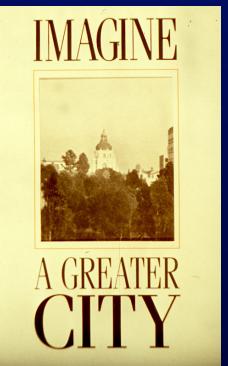




#### Plan proactively

### Develop a Vision for Community

Pasadena General Plan





#### Plan proactively

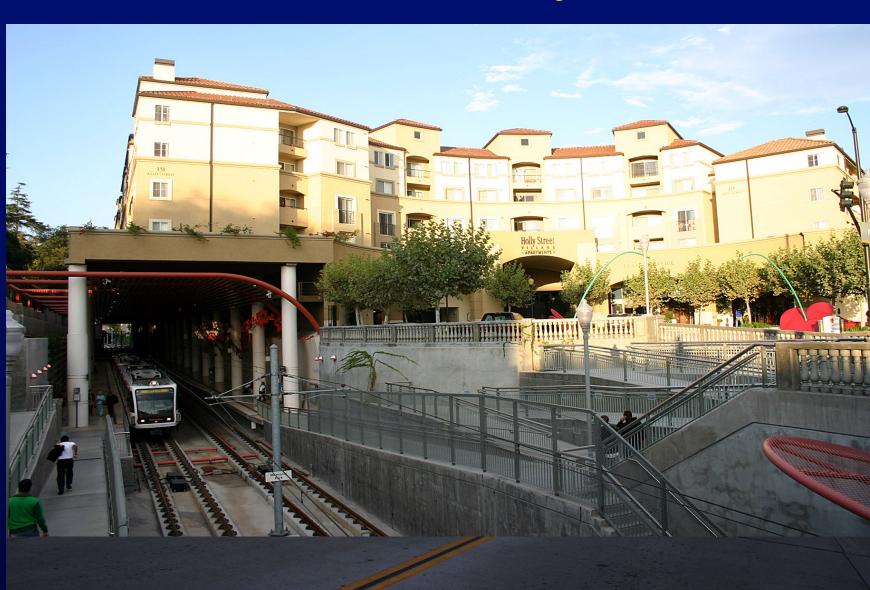
### Develop a Vision for Community

Pasadena General Plan

Holly Street Village

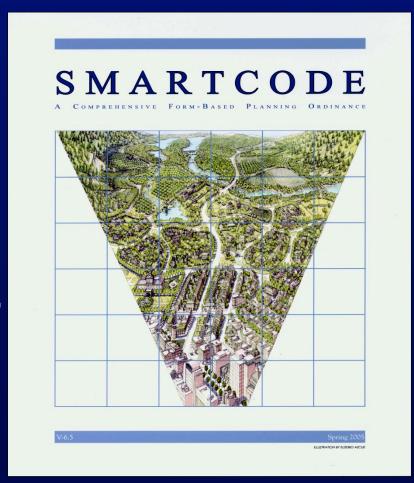
Infill, mixed use rental housing

Model: Early 1990s



## Implementing the Vision

- State-of-the-Art Development
   Codes Form-Based Codes
  - Recognition that current zoning and land development regulations are flawed
  - New approaches to fixing them
  - New emphasis on form-based codes, SmartCode
  - Problems with conventional codes that emphasize use and intensity of development



### Additional Resources

- Smart Growth Network
  - www.smartgrowth.org
- Smart Growth America
- Local Government Commission
  - www.lgc.org
- Congress for the New Urbanism
  - www.cnu.org

### Thank You!

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