

# Transportation Design FOR Communities

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Atlanta, GA  
May 11-12, 2006

## Transportation Design for Communities

*Hosted by the Center for Quality Growth and Regional  
Development at the Georgia Institute of Technology*

### Module 6: National Trends in Transportation & Community Design

May 12, 2006 Atlanta, GA

Instructor: Tim Jackson, P.E., AICP

Module 6 will review the status of emerging initiatives to design transportation facilities that build better communities. These will include the status of the "context sensitive solutions" initiative of FHWA and AASHTO, particularly focused on the progress that many states are making in bringing this approach to their project development process with specific examples from Pennsylvania and New Jersey.

*Unless otherwise noted, all images are the property of Glatting Jackson Kercher Anglin Lopez Rinehart, Inc.*



# WHAT'S NEXT ?

## Module 6

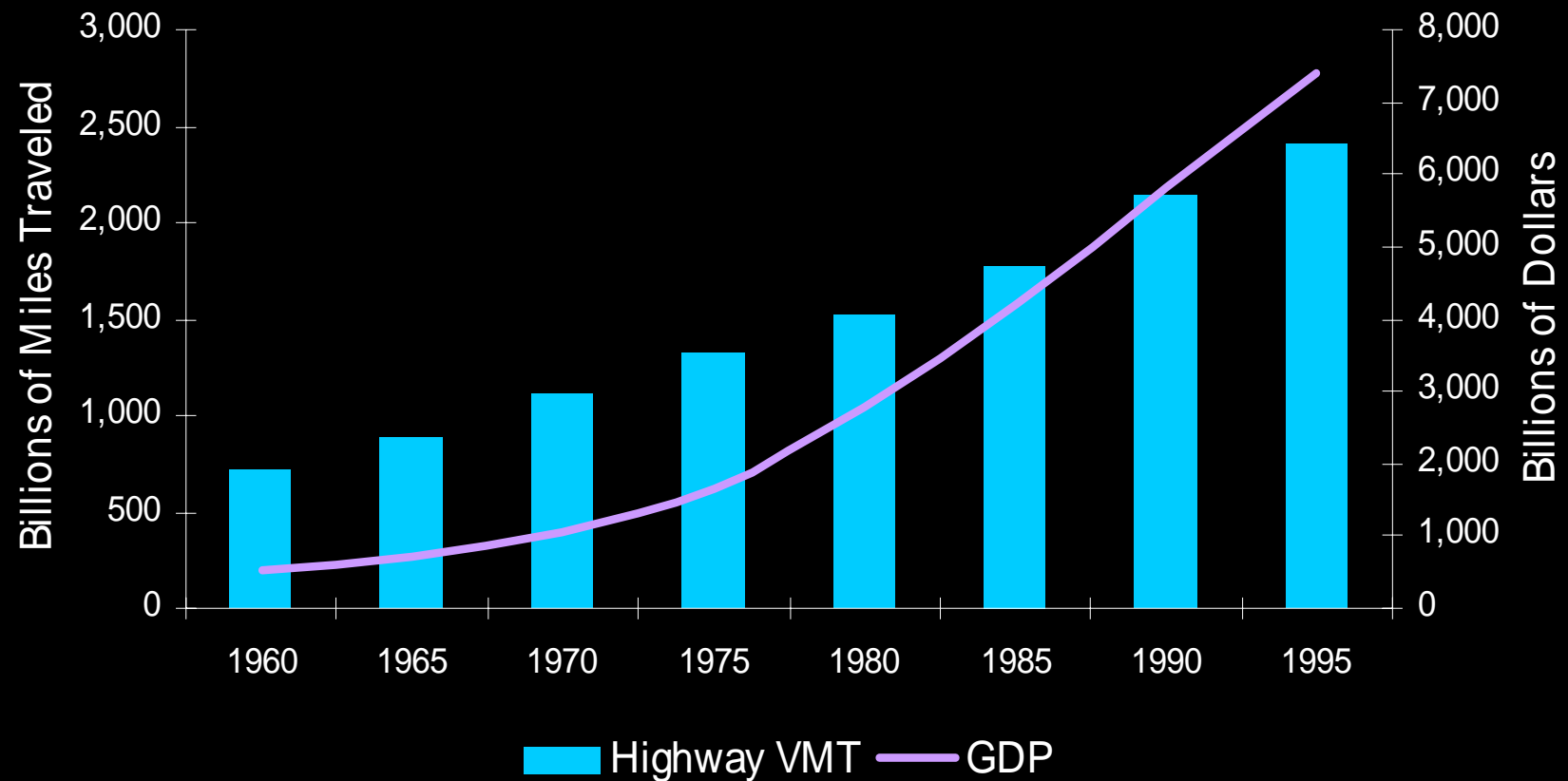
**Transportation  
investments are  
powerful and  
far-reaching**



Smart Growth and Smart Transportation

## Transportation's power

Transportation improvements allow economic growth.



Smart Growth and Smart Transportation



# Frequently, transportation has detracted from quality of life



Destroys resources during construction



Smart Growth and Smart Transportation

## Transportation has detracted from quality of life

Changes the character of rural areas

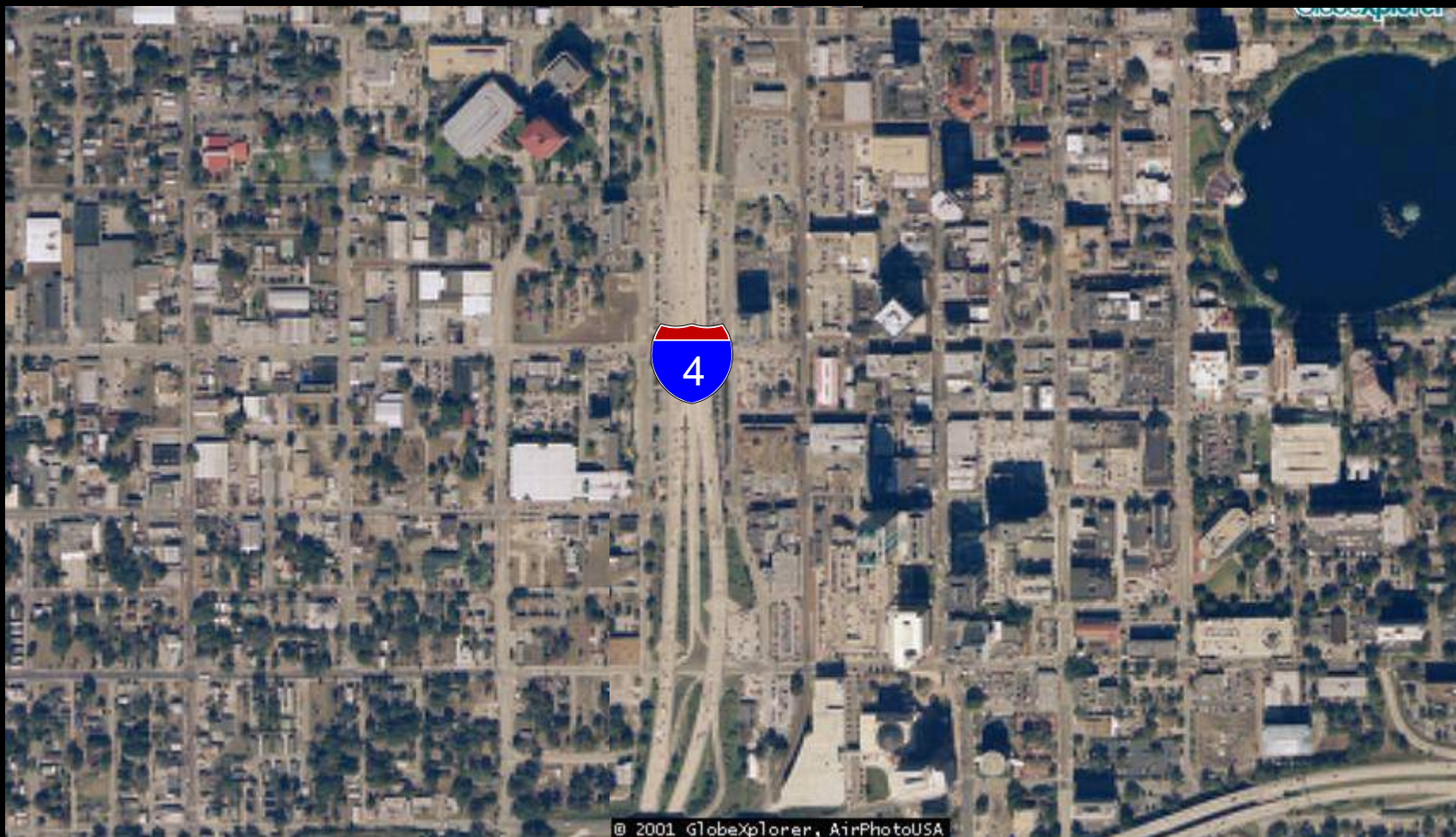


Smart Growth and Smart Transportation



# Transportation has detracted from quality of life

Splits communities



Downtown Orlando

Smart Growth and Smart Transportation



# Transportation has detracted from quality of life

Harms the environment



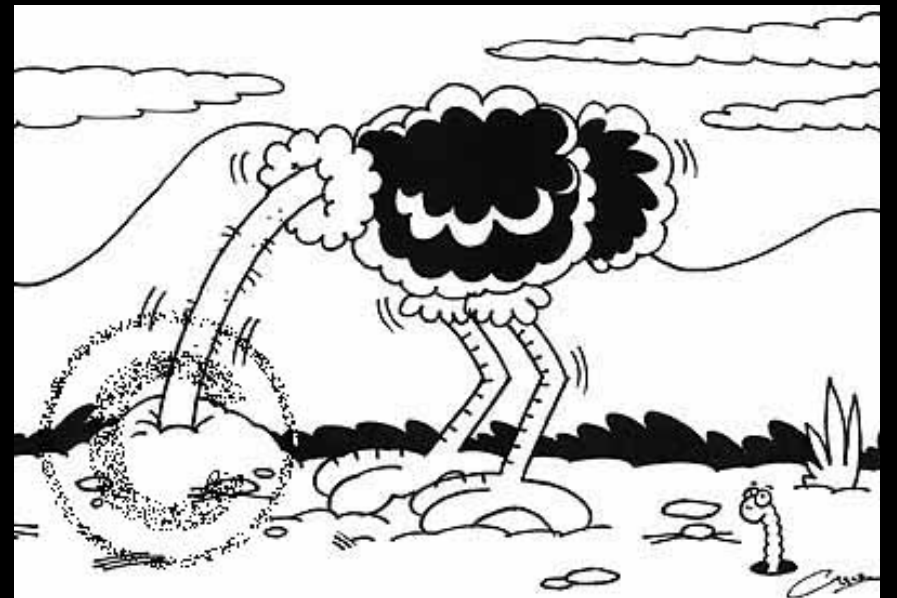
Impervious surfaces and water quality

Smart Growth and Smart Transportation

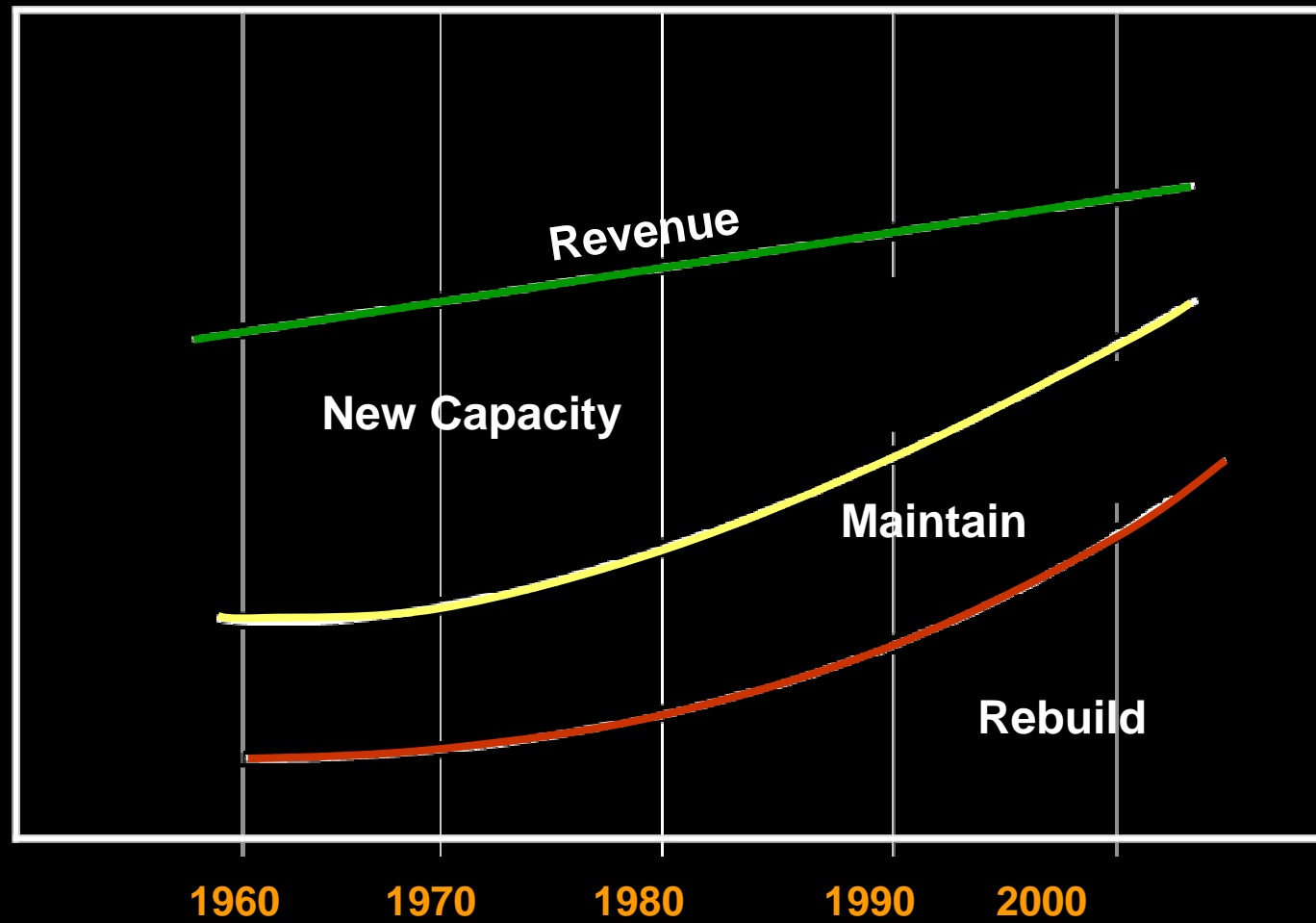




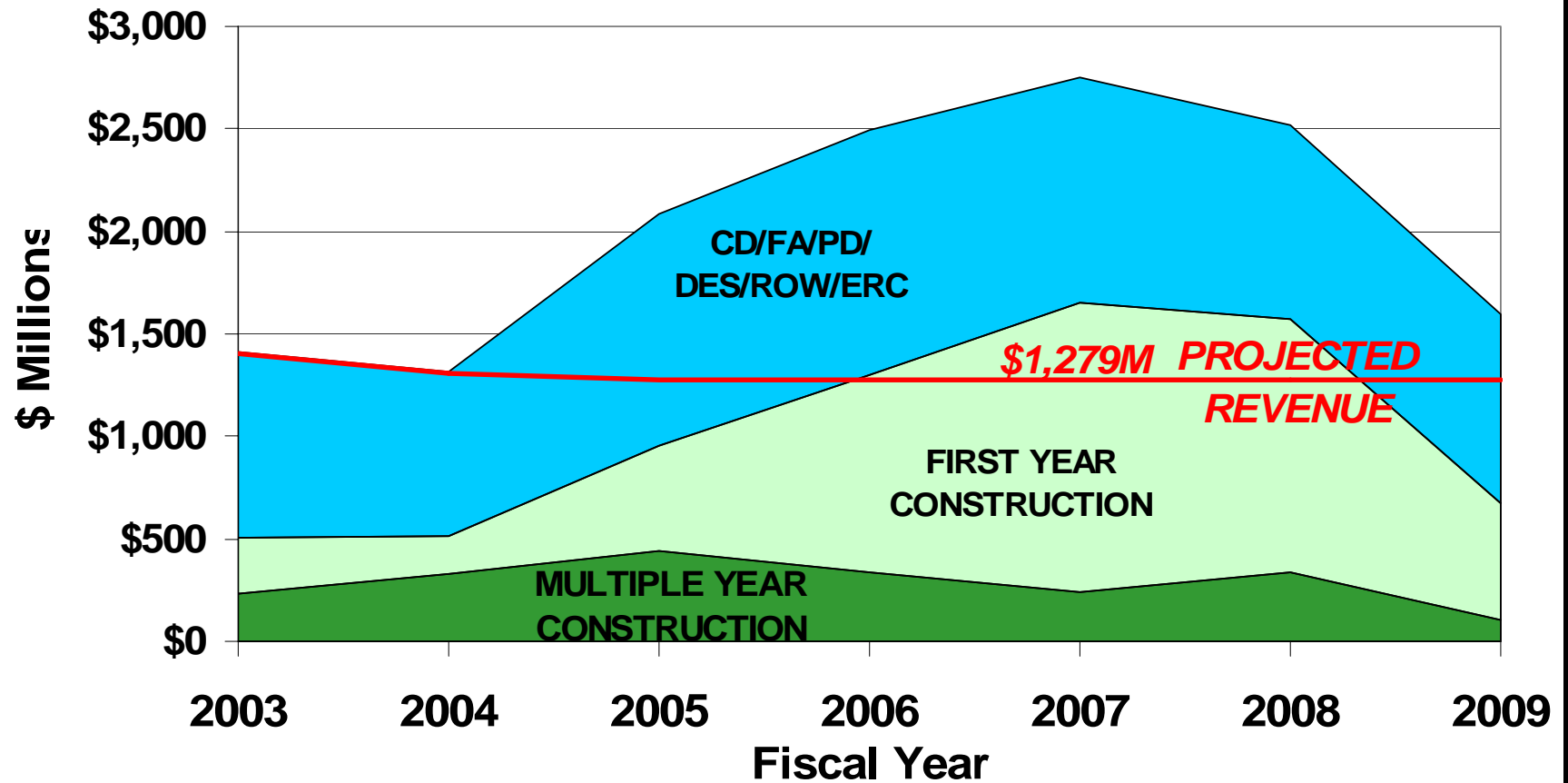
**“Land Use .... Is not our business”**



Total Road Budget, US

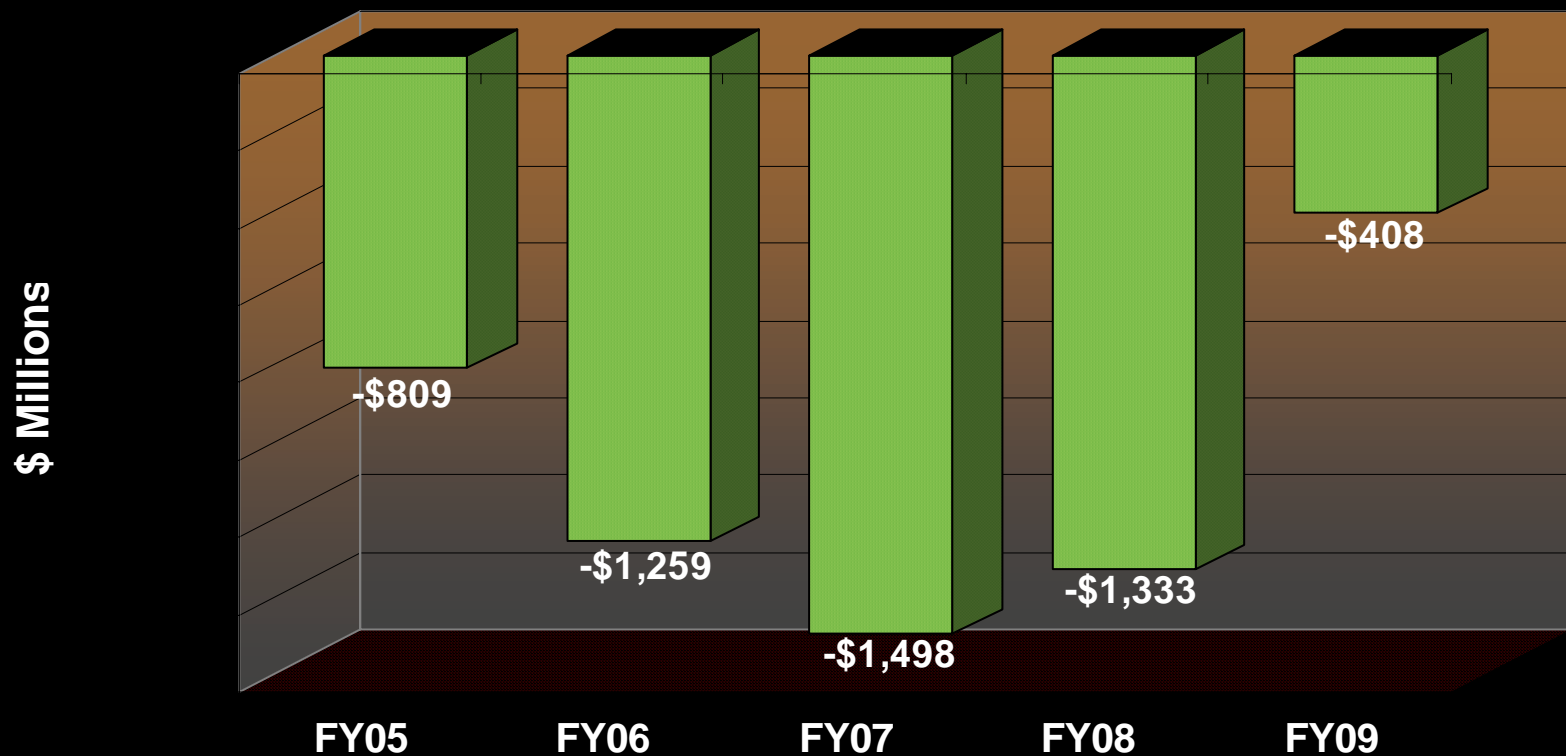


## FY2003-2009 CONSTRUCTION FUNDING NEEDS



# FY2005 - FY2009 Project Pool

## PROJECTED SHORTFALLS





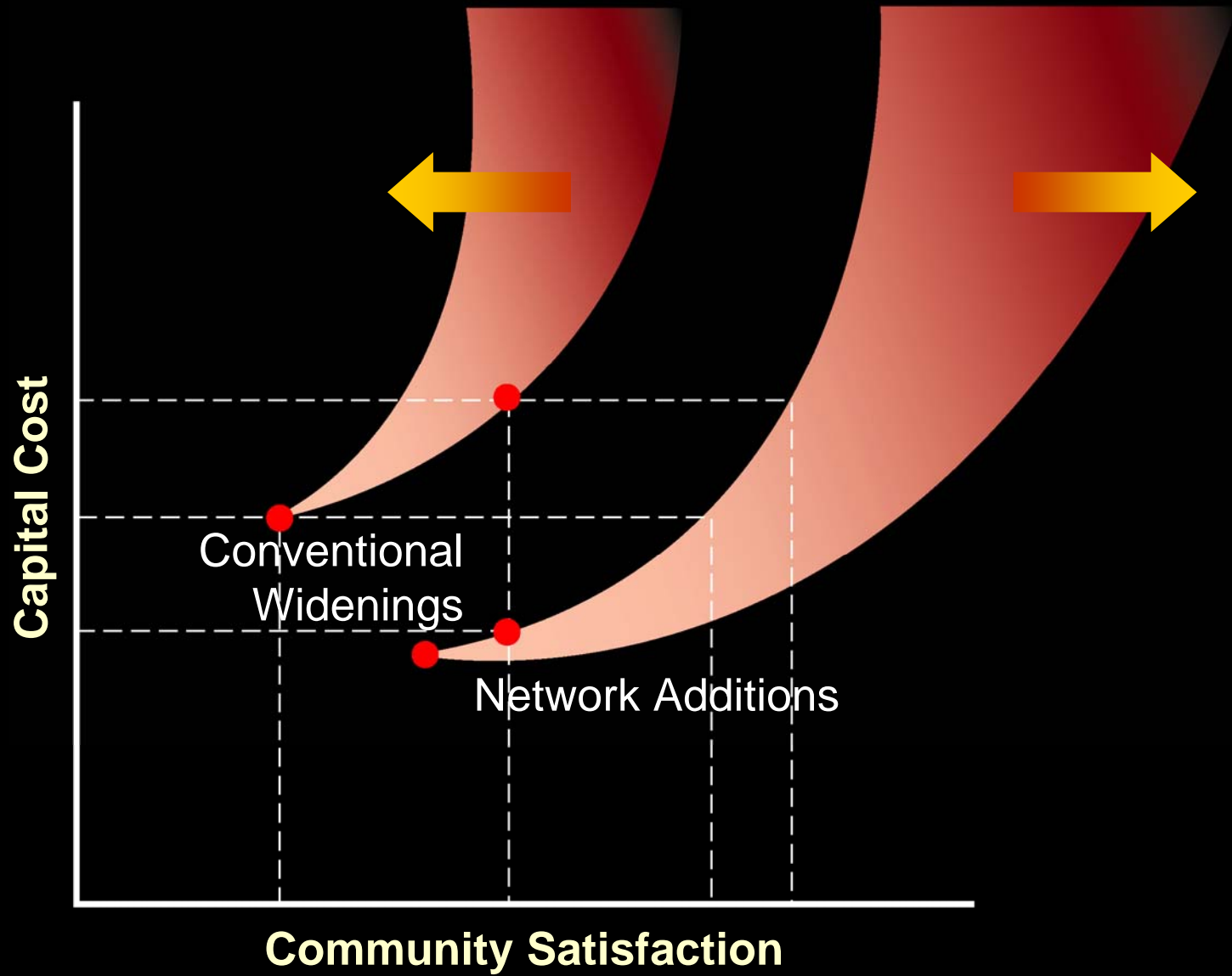
# FY2005 - FY2009 Project Pool



# FY2005 - FY2009 Project Pool



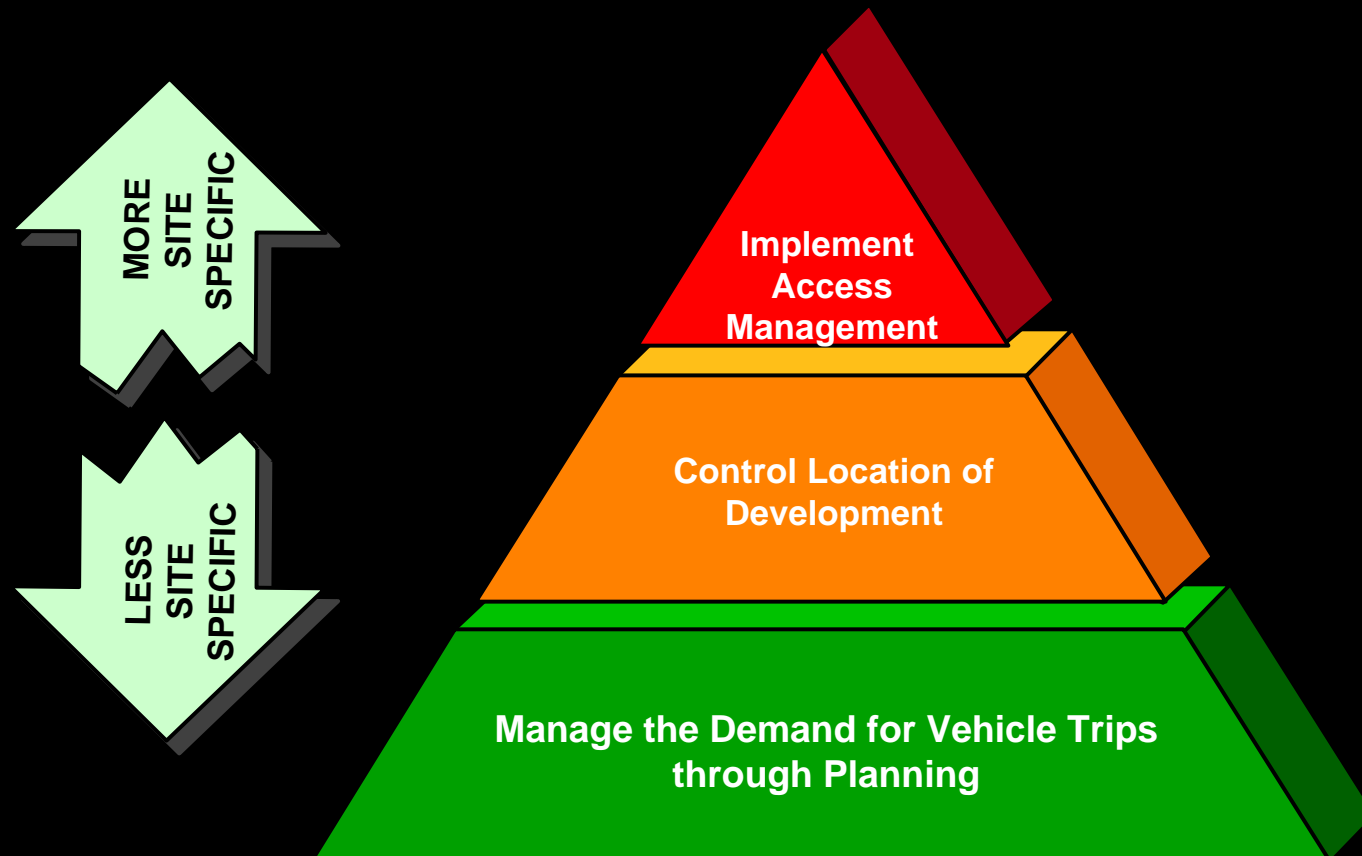
**Goal: Affordable**



**Goal: Sustainable**

## How Can Land Use Measures Break the Cycle?

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# Transportation must now take responsibility, and help create livable places

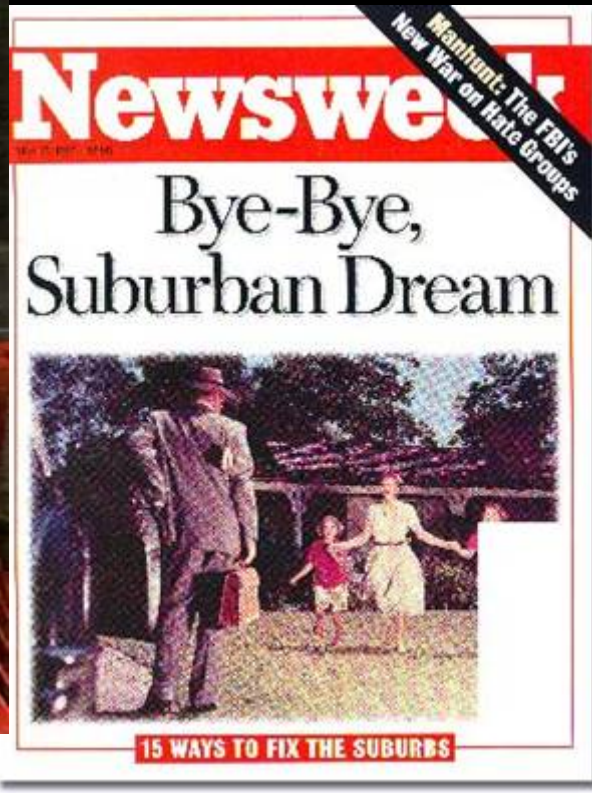
“Use your powers for good!”



Smart Growth and Smart Transportation

One movement centered on quality of life:

Smart Growth



Smart Growth and Smart Transportation

# SMART GROWTH *in Maryland*

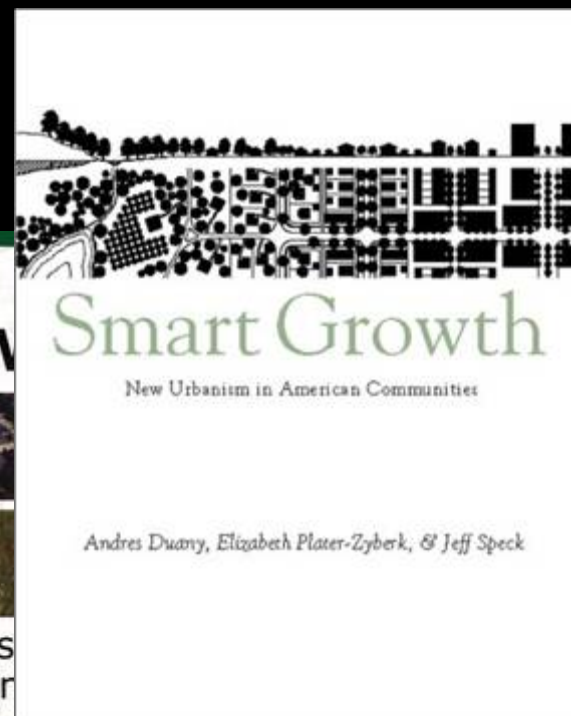


## A GUIDE TO SMART GROWTH



### Shattering Myths Providing Solutions

Edited by  
Jane S. Shaw and Ronald D. Utt  
Preface by  
The Honorable Malcolm Wallop



### ***What***

- **Strengthen and direct development towards existing communities**
- **Foster distinctive, attractive places with a strong sense of place**
- **Provide a variety of transportation choices**
- **Create walkable neighborhoods**
- **Preserve open space, farmland, natural beauty and critical environmental areas**

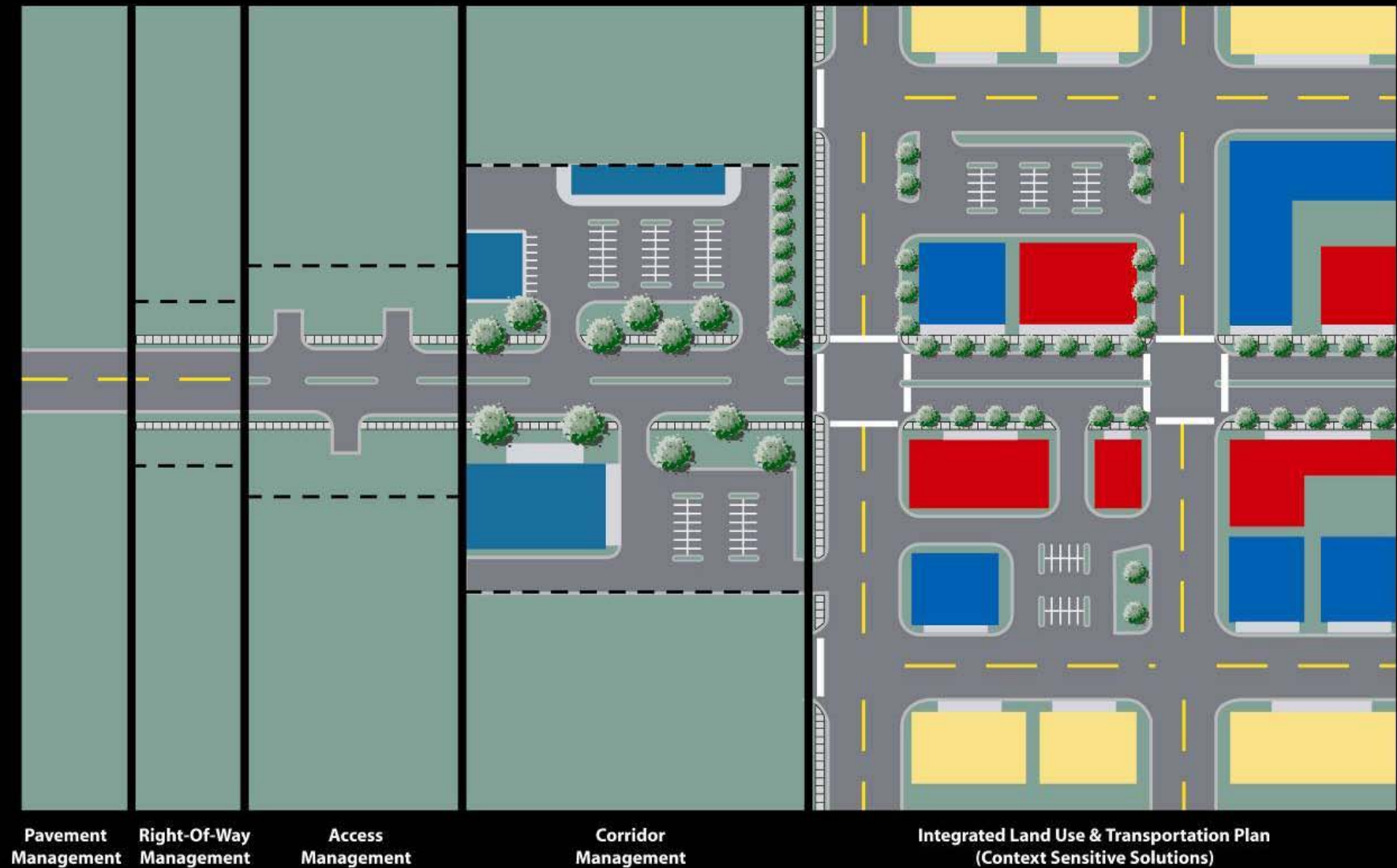
### ***How***

- **Encourage community and stakeholder collaboration**
- **Make development decisions predictable, fair and cost effective**



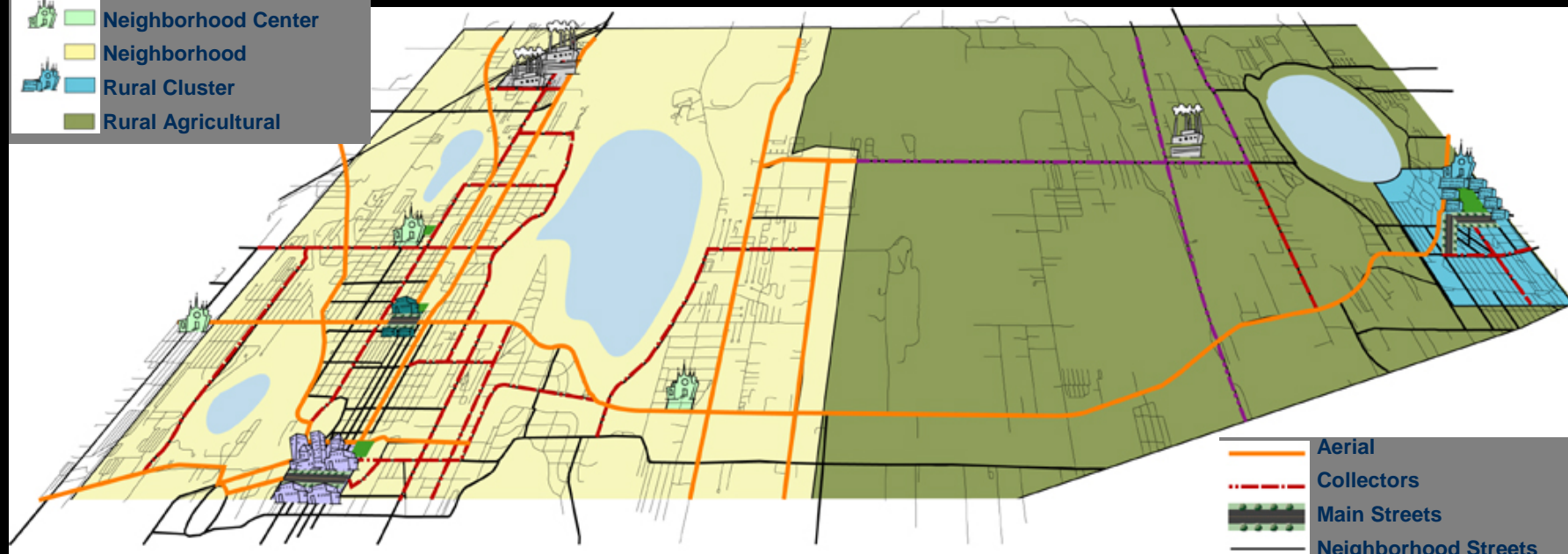
## Reframing Key Transportation Conventions

Context



## Evolution of Integrated Land Use and Transportation Plans

# Corridor Design Manual



## Corridor Types

Land Use Context

	Arterials	Collectors	Main Streets	Neighborhood Streets	Farm-to-Market Roads	Bicycle and Pedestrian Trail
Urban Activity Center	●	●	●	●		●
Industrial	●	●				
Village Center			●	●		●
Neighborhood Center				●		●
Neighborhood				●		●
Rural Cluster	●	●	●	●		●
Rural Agricultural	●	●		●	●	●

# Corridor Design Guidelines - Corridor Types



Arterials



Main Streets



Collectors



Neighborhood  
Streets



Farm to  
Market  
Roads



Bicycle and  
Pedestrian  
Trails



## Corridor Design Guidelines – Land Use Context



Urban Activity Center



Village Center



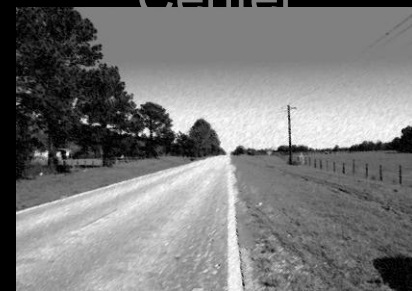
Neighborhood  
Center



Neighborhood



Rural Cluster



Rural Agricultural



Industrial

**Comprehensive  
Plans**

**Countywide  
Vision**

**Regional  
Plans**

**Corridor  
Design  
Manual**

**Communicate  
Standards**

**Land  
Development  
Regulations**

**Capital  
Improvements  
Plan**

# Corridor Specific Guidelines

## CORRIDOR TYPE: **ARTERIAL**



Urban Activity Center

### LAND USE CLASSIFICATION: URBAN ACTIVITY CENTER

#### REQUIRED

- Curb and gutter
- Street and pedestrian scale lighting
- Shade trees
- Sidewalks
- Transit stops with benches (if service is provided)
- Pedestrian activated crossing signal at signalized intersections
- Bicycle lane or wide outside travel lane

#### OPTIONAL

- On-street parking
- Planting strip
- Mid block pedestrian crossing
- Raised median
- Continuous left turn lane
- Bus Shelters

#### DESIGN ELEMENT

MINIMUM Width (feet)	MAXIMUM Width (feet)
10	12
14	14
4	6
12	30
11	14
4	5
7	7
8	10
4	8
8	12
6	10
80	130

- |  |    |     |
|--|----|-----|
| • Vehicle lanes (when bicycle lane is present)   | 10 | 12  |
| • Outside vehicle lane (no bicycle lane present) | 14 | 14  |
| • Raised median                                  | 4  | 6   |
| - infrequent driveways and intersections         | 12 | 30  |
| - short blocks, left turn lanes                  | 11 | 14  |
| • Continuous left turn lanes                     | 4  | 5   |
| • Bicycle lane                                   | 7  | 7   |
| • Parking lane                                   | 8  | 10  |
| - with bicycle lane                              | 4  | 8   |
| - no bicycle lane                                | 8  | 12  |
| • Planting strip                                 | 6  | 10  |
| • Sidewalk                                       | 80 | 130 |
| - on curb  |    |     |
| - off curb                                       |    |     |
| • ROW width                                      |    |     |

#### DESIGN SPEED: 35 MPH - 45 MPH



Continuous left turn lane/bicycle lane

Note: Where ROW permits, it is always preferred to provide a bicycle lane.

#### DESIGN SPEED: 35 MPH - 45 MPH



Raised median/wide outside travel lane

# Corridor Specific Guidelines

## CORRIDOR TYPE: ARTERIAL



Rural Agricultural

### LAND USE CLASSIFICATION: RURAL AGRICULTURAL

#### REQUIRED

- Grass median
- Paved shoulder

#### OPTIONAL

- Striped bicycle lane

#### DESIGN ELEMENT

- Vehicle lanes
- Paved shoulder/Bicycle lane  
speed  $\leq$  45 mph  
speed  $>$  45 mph
- Median
- ROW width

#### MINIMUM Width (feet)

#### MAXIMUM Width (feet)

10

12

5

8

6

8

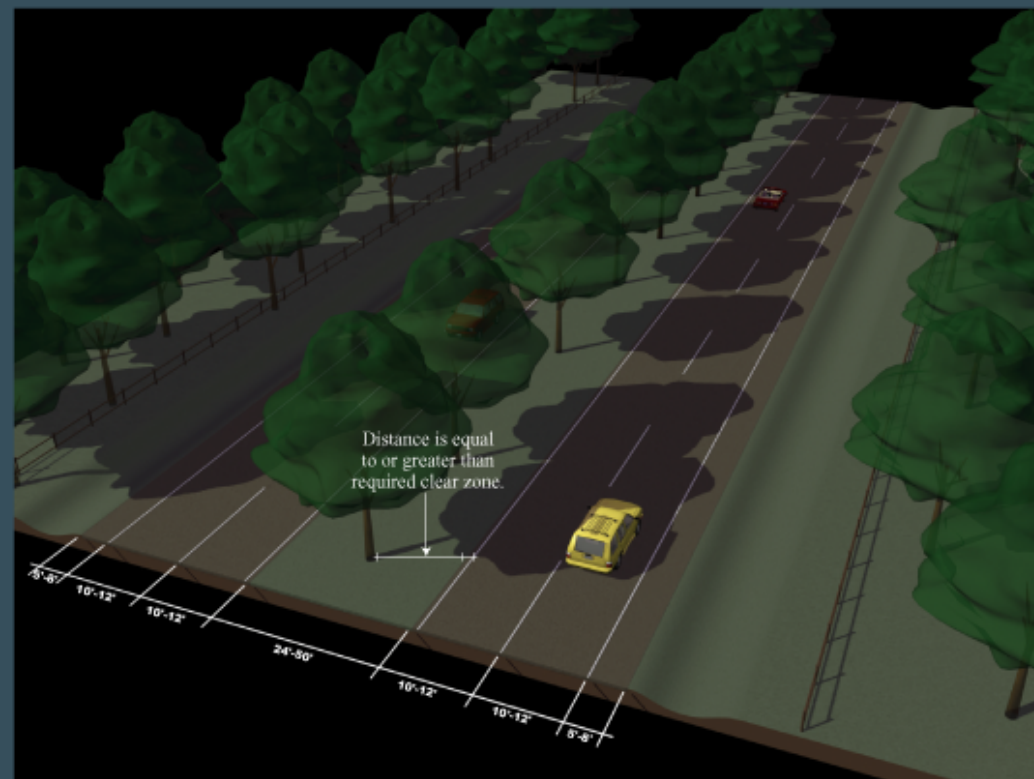
24

50

100

140

DESIGN SPEED: 45-60 MPH





# Corridor Specific Guidelines

## CORRIDOR TYPE: MAIN STREET



Urban Activity Center

Village Center

Rural Cluster

### LAND USE CONTEXT: URBAN ACTIVITY CENTER/ VILLAGE CENTER/RURAL CLUSTER

#### REQUIRED

- On-street parking
- Bulb-outs with landscaping
- Cutter
- Shade trees
- Pedestrian scale lighting
- Shelter at bus stop (if served by transit)
- Pedestrian crosswalk treatment

#### OPTIONAL

- Bicycle lane
- Curb

DESIGN ELEMENT	MINIMUM Width (Feet)	MAXIMUM Width (Feet)
Vehicle lane width	10	11
Bicycle lane	5	5
Parallel parking		
- with bike lane	7	7
- without bike lane	7	10
Angled parking		
- length	19	20
- width	9	11
Sidewalk	8	15
ROW width	56	82

#### PARKING OPTIONS PARALLEL PARKING



#### FRONT END ANGLED PARKING



#### REAR END ANGLED PARKING



Note: Width of parking lane may be measured from face of curb, and may include all or a portion of the gutter.

#### SIDEWALK OPTIONS

##### STROLL

Allows for 2 way pedestrian travel and amenities such as benches and trash receptacles.



##### PLAZA

Provides space for outdoor dining or cafe.



#### DESIGN SPEED: 25-30 MPH



#### DESIGN SPEED: 25-30 MPH



#### DESIGN SPEED: 25-30 MPH



# Corridor Specific Guidelines

## CORRIDOR TYPE: NEIGHBORHOOD STREET



Neighborhood Center



Neighborhoods

### LAND USE CONTEXT: NEIGHBORHOOD/ NEIGHBORHOOD CENTER

#### REQUIRED

- Curb and gutter
- On-street parking
- Pedestrian scale lighting
- Planting strip
- Shade trees
- Sidewalks

#### OPTIONAL

- Brick pavement
- Neckdowns at intersections
- Bulbouts

DESIGN ELEMENT	MINIMUM Width (feet)	MAXIMUM Width (feet)
• Cartway (includes gutter)	16	26
• Planting strip	4	8
• Sidewalk	5	8
• ROW Width	36	58

Note: In neighborhood centers with big activity uses such as schools, parks, and churches, 6' sidewalks are required.

### SLOW STREET - PARKING ON BOTH SIDES DESIGN SPEED: 20 MPH



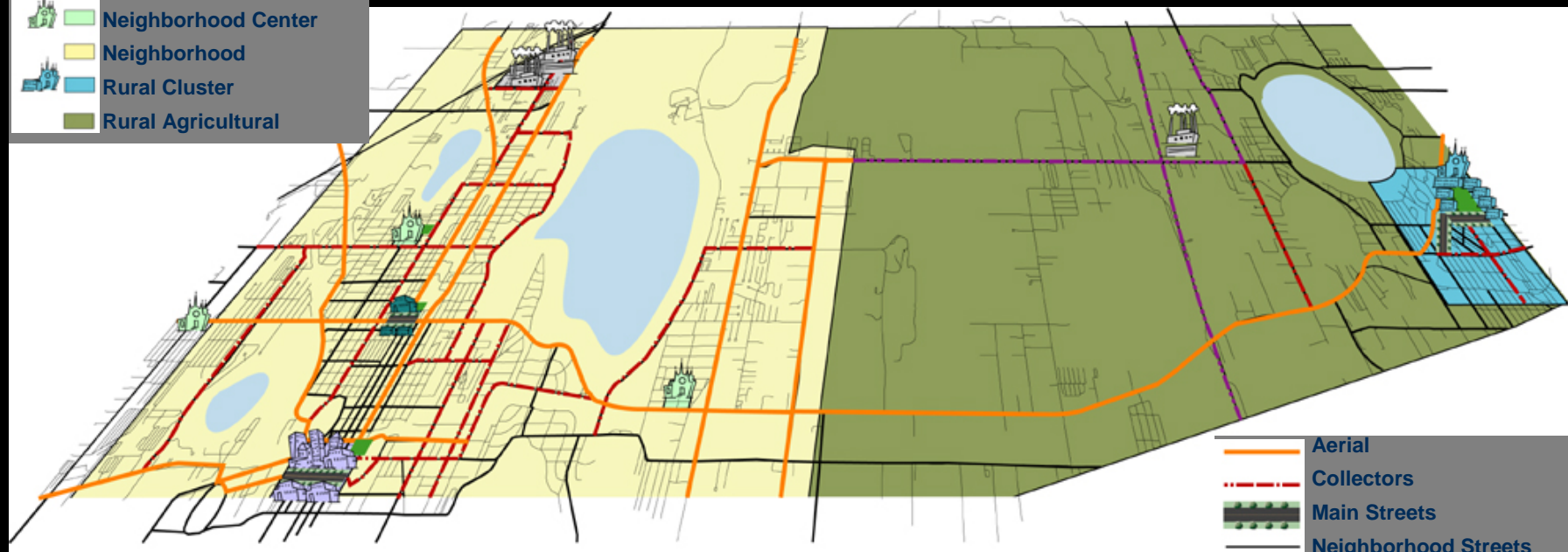
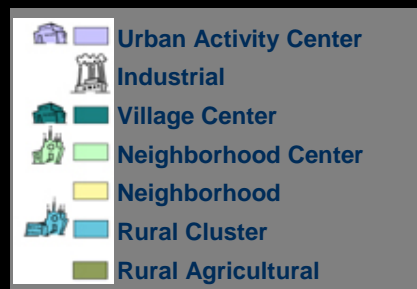
### YIELD FLOW STREET - PARKING ON BOTH SIDES DESIGN SPEED: 20 MPH



### YIELD FLOW STREET - PARKING ON ONE SIDE DESIGN SPEED: 20 MPH



# Corridor Design Manual



## Corridor Types

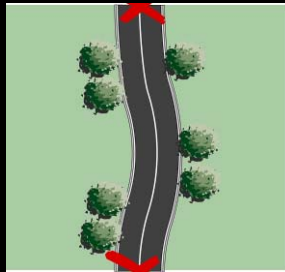
Land Use Context

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Industrial	●	●				
Village Center			●	●		●
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Neighborhood				●		●
Rural Cluster	●	●	●	●		●
Rural Agricultural	●	●		●	●	●



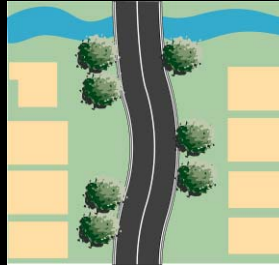
# Master Planning Process

## Step 1



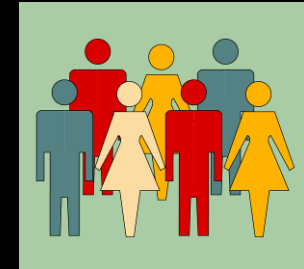
Define  
Study

## Step 2



Define  
Context

## Step 3



Visioning

## Step 4



Design

## Step 5



Implementation



Tom Ewart/NWA

## How Wal-Mart Became Small-Mart

Pushed by smaller rivals, Wal-Mart created Neighborhood Markets to offer more convenient shopping to those too rushed or too weary to roam the much larger Wal-Mart stores.

AVERAGE SQUARE FEET	40,000	200,000
AVERAGE NUMBER OF ITEMS	24,000	100,000
NUMBER OF STORES	46 in 8 states	1,244 in 44 states
STORES OPENING THIS YEAR	20-25	200-210

Source: Wal-Mart

The New York Times

By CONSTANCE L. HAYS

After carpeting the country with stores measuring 150,000 square feet or more, retailers are discovering that people do not always have the time or the inclination to get all the way through them.

Yes, the abundance of a 200,000-square-foot Wal-Mart Supercenter is impressive: the equivalent of four football fields of stuff. And sure, it's handy to be able to buy just about everything at a single 175,000-square-foot SuperTarget. But at the same time, time-pressed shoppers, particularly millions of aging baby boomers, are sometimes finding these stores to be too large, too inconvenient and too tiring to get all the way through.

And the big-box retailers have noticed. Wal-Mart Stores has been aggressively opening scaled-down versions of its Super-

# For America's Big Retailers, Small Is Beautiful, Sometimes



Bloomberg News

centers — less than one-quarter their size — called Neighborhood Markets. So far the company has built 46 smaller stores scattered through Oklahoma, Arkansas, Texas, Mississippi and Tennessee; a handful opened in Florida, Alabama and Utah in the past week. Retail analysts have taken to calling them Small-Marts.

In Brooklyn, Home Depot has opened a shrunk version of its usual model. Other retailers, including Toys "R" Us and Staples are retrofitting stores to make them smaller, cozier and more intimate, qualities the big-box format was supposed to displace.

"Customers are demanding respect for their time," said David M. Szymanski, director of the Center for Retailing Studies at Texas A&M University. "One way to respond to that is to offer formats that cater to that."

Leisa Still suffers at times from big-store fatigue. Ms. Still,

Continued on Page 2





**Face 1- Town Center**





**Face 2 - Boulevard**





**Face 3 - Parking Lot**





**“Put the Fat Chicken Out Front” – David Butterfield**





**Face 2 – Parking Lot**

















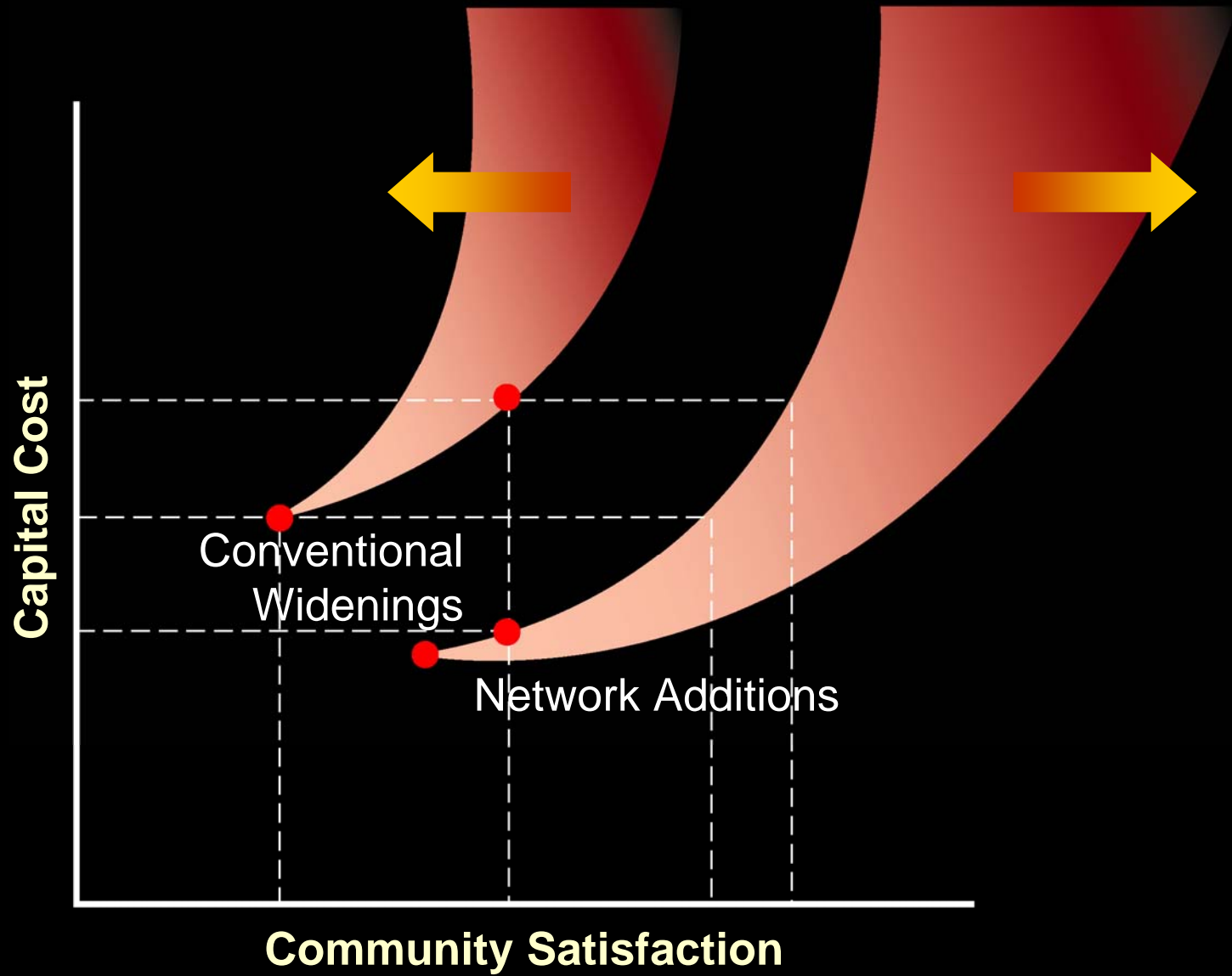




## Initial Approach to CSD



**Goal: Affordable**



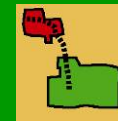
# Seminar Framework



*State Policies*



*Regional  
Coordination*



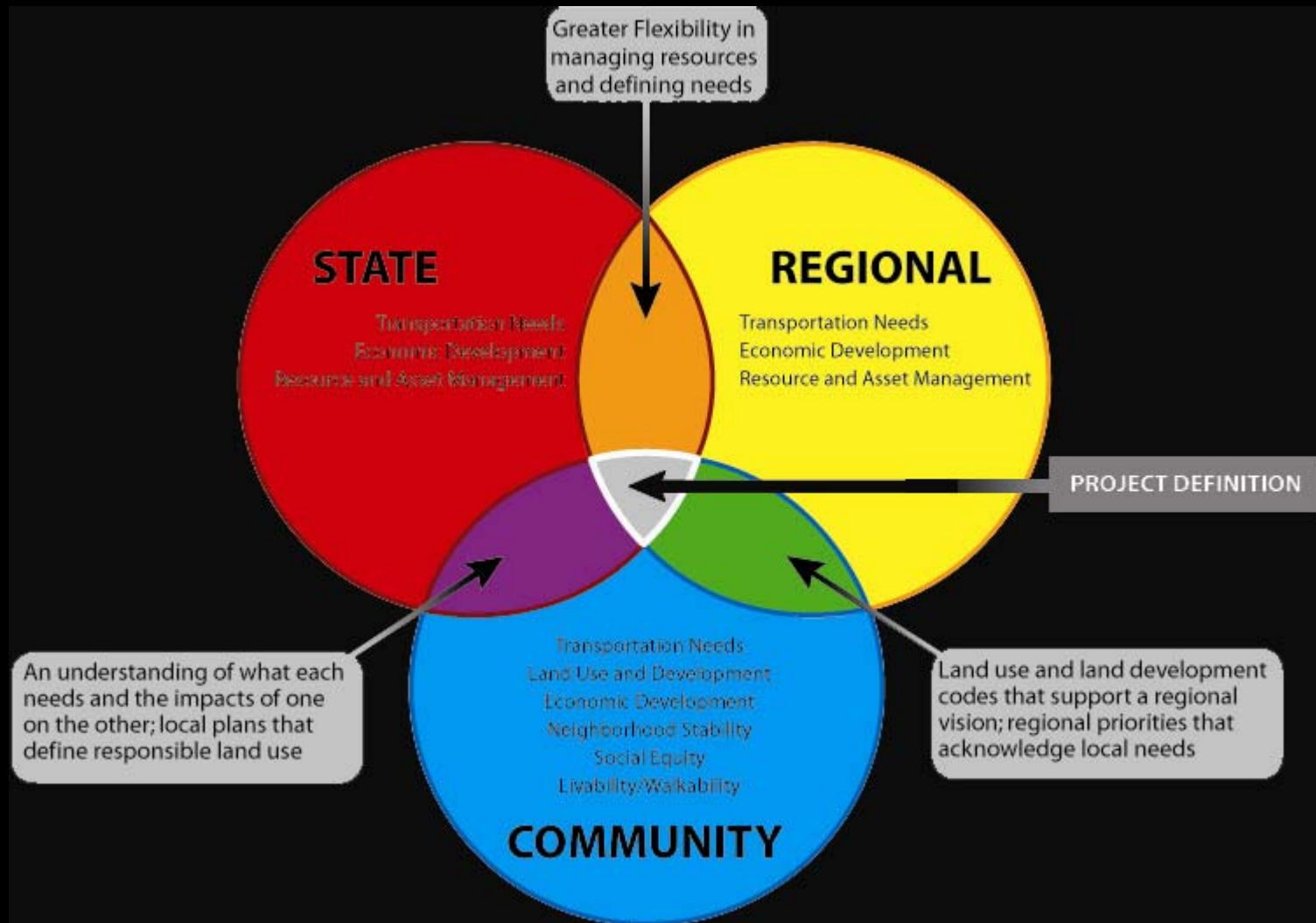
*Project  
Implementation*



*Local  
Land Use  
Controls*



## WHAT IS IDEAL



# State Initiatives

## Statewide Coordination, Communication, and Education

- Joint planning commissions
- Interagency land use team
- State planning board
- Forum on transportation investments
- Policies: CSS Directive, “Fix-it-first” , update design manual

## Support / Fund Regional Vision Plans, Local Initiatives

- Regional Blueprint Planning Program
- Cool Cities
- Walkability audits

## Direct Where State Funds are Spent

- Policy to direct State facilities into urban areas
- Safe routes to school
- “Cool Cities”

## Direct What State Funds are Spent on

- “Fix-it-first”
- “Right-sizing” ; “Giving Communities What They Want”
- Practice Context Sensitive Design
- Update design manual, staff training
- Invest in local road network, connectivity
- Accept we can’t/shouldn’t always build our way out of congestion

# Regional Initiatives

## Financial Incentives

- Matching grant programs for smart growth projects: public and private investments

## Education

- Forums, symposium, workshops
- Toolbox
- Communicate options: transportation, land use, form, design
- Credible, understandable analysis

## Provide Forum for Regional Communication

- Stakeholder working group
- Convene leaders to discuss land use / transportation
- Build relationships
- Land use decision-makers on transportation planning boards

## Create / Sustain A Shared Regional Vision

- Very long range, 40-50 years
- Process: Inclusive, broad based, high-level community ownership, elected leaders, options reflect community values
- Prioritized project based on vision
- Design projects based on vision

# Project Implementation

## Tailor Process For Each Unique Community/Corridor

- Inclusive
- Stakeholder interviews, listen
- Time/\$ to fully understand community before starting design
- Community design workshops –hands-on, visual
- “Giving Communities What They Want”; early victories

## Communities Create and Codify Land Use Design Plan

- State provide funding, staffing, expertise
- Develop community alternatives not just project alternatives
- Communicate – visual tools
- Create land use design plan to guide public and private investment
- Condition State investment on community implementing the design plan (true partnership)

## Use Context Sensitive Design

- Design facilities to reflect community land use design plan
- Allow context to determine facility design
- Update state design manual; institutionalize process

## Invest In Network Connectivity

- Leverage private investment in site roadways to create network
- Build network that reflects community land use design plan
- Fund local road network



# BACK TO *Prosperity*



A COMPETITIVE AGENDA FOR  
*Renewing Pennsylvania*

THE BROOKINGS INSTITUTION CENTER ON URBAN AND METROPOLITAN POLICY

# Orlando Sentinel

OrlandoSentinel.com

FINAL EDITION WEDNESDAY, OCTOBER 8, 2003

50 CENTS

MOBILITY 20/20

## Voters: No tax for roads

WHAT'S NEXT

Tax's defeat means leaders must seek new traffic fixes

YES  
46%

NO  
54%

Backers blame loss on I-4 toll lanes, rail

By SCOTT POWERS  
SENTINEL STAFF WRITER

The spectacular implosion of the Mobility 20/20 transportation plan Tuesday will force Orange County and Orlando leaders to find a new way out of the region's gridlock.

But Tuesday night, the political patrons of the half-cent sales tax acknowledged they have no road map.

"There is no Plan B," said Orlando Mayor Buddy Dyer after results showed the tax had failed by a vote of 54 percent to 46 percent.

That means the county, its cities and the Florida Department of Transportation are stuck with Plan A: a less ambitious slate of improvements in place before the Mobility 20/20 ideas were pitched.

But that plan includes no significant improvements to Interstate 4 for more than a decade, no money for rail transit and virtually no hope to win any big federal grants.

"Maybe tomorrow when people are sitting in traffic, they'll say, 'Damn, maybe I should have voted for it,'" said Dick Bachelor at the Mobility 20/20 headquarters, where the crowd had dwindled to just about a dozen people by 9 p.m.

"The voters of Orange County have spoken," Orange County Chairman Rich Crotty said.

Neither he nor Dyer would entertain suggestions that they would bring another transportation package before



**Concede.** Orlando Mayor Buddy Dyer (left) and Orange County Chairman Rich Crotty admit defeat at Mobility 20/20 headquarters Tuesday. Even strong city-county cooperation could not sell voters on a road tax to build roads. Dyer said there is not a Plan B for congestion.

By MARK SCHLESER  
SENTINEL STAFF WRITER

Voters force-fed a stunning defeat to Orange County's political, business and community leaders Tuesday, handily rejecting a transportation tax billed as the region's last, best hope to come to grips with congested roads.

Proponents blamed the loss on Florida's traditional resistance to higher taxes, a poor economy, mistrust of government and public distaste for toll lanes and a rail system.

The Mobility 20/20 plan — a comprehensive list of 14 road, rail, sidewalk and bike path projects — went down 53,210-45,236, a margin of 7,974 votes, 54 to 46 percent.

More than 22 percent of Orange's registered voters went to the polls, a significant number for a ballot with only a single question.

The loss came after pro-tax supporters lined up unprecedented support among the area's elite and added their push with a record \$1.5 million campaign cash. The defeated critics of the plan — an left supporters struggling to understand what went wrong.

"What this was really about wasn't the government trying to tell the citizens what to do but the government offering the opportunity for citizens to make the ultimate decision. They decided. I respect that," said Orange County Chairman Rich Crotty, the plan's chief architect and biggest booster.

PLEASE SEE NEXT, A14

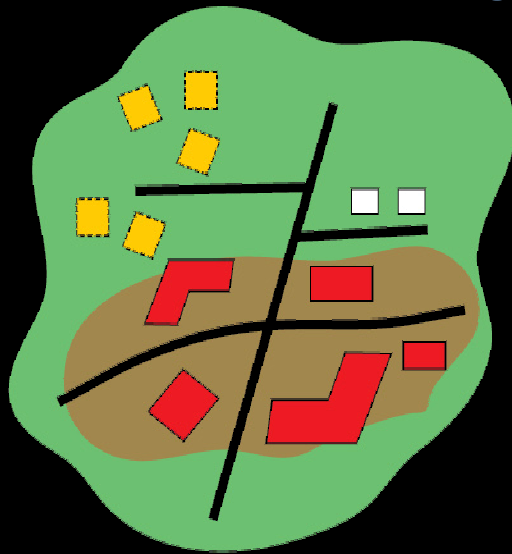
PLEASE SEE DEFEAT, A1

**“Trying to cure traffic  
congestion with more  
capacity is like trying to cure  
obesity by loosening your  
belt”**

**- Glen Heimstra, Futurist**

# Land Use/Transportation

## Land Use

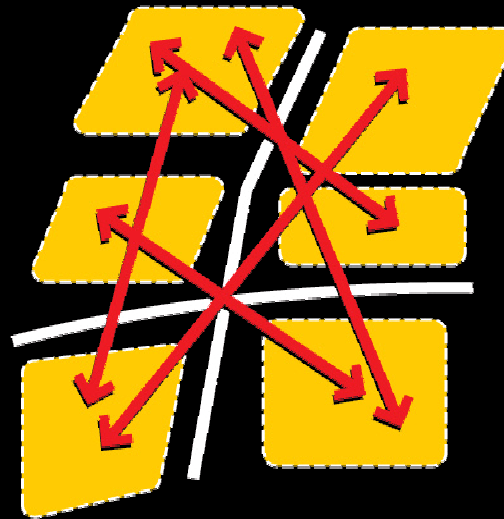


### Anticipate Manage Intensity Influence Form

- Land Use
- LDR's

generates

## Travel

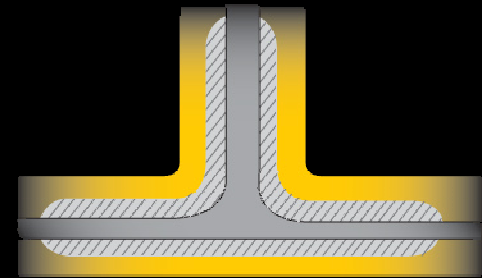


### Forecast

- Feedback
- Inform, Not Dictate

demands

## Road Capacity



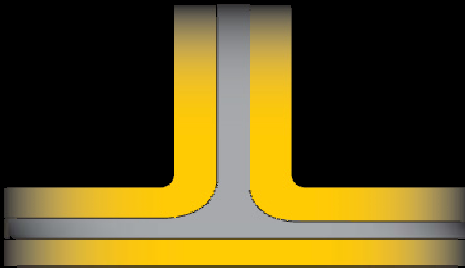
### Accommodate

- Network
- Community Centered



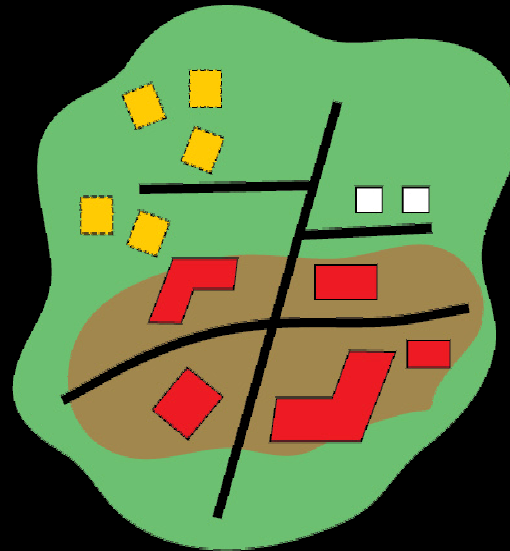
# Land Use/Transportation

Road Design



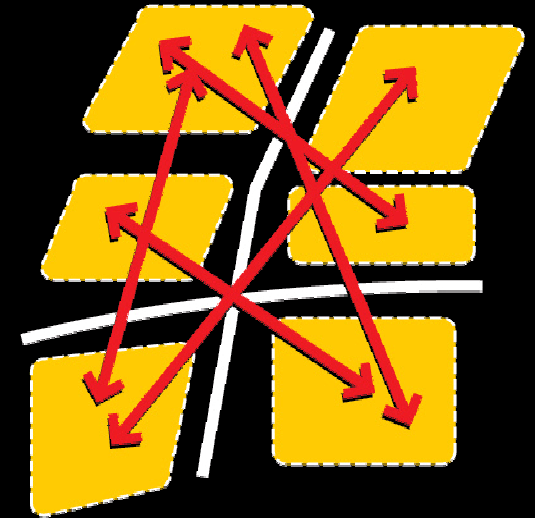
manages

Travel

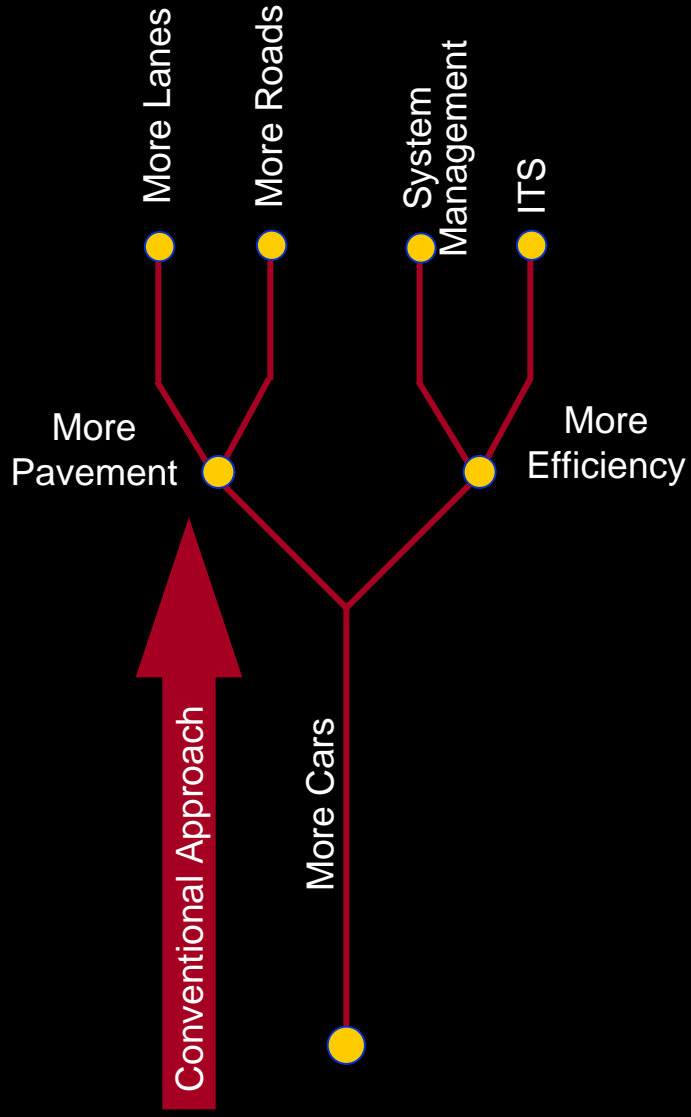


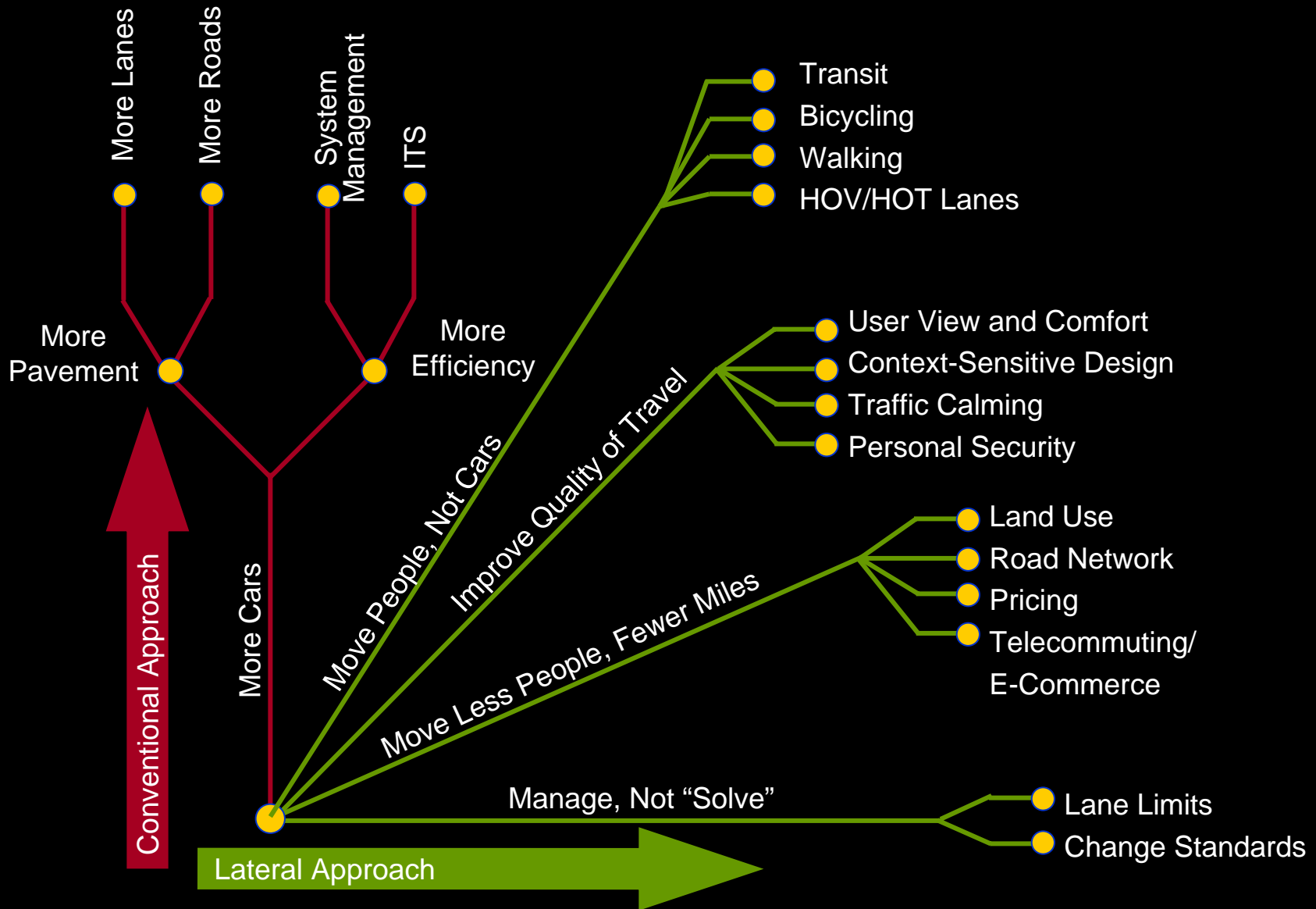
influences

Land Use



- Lead Land Use
- Condition Protects
- Manage Supply







Transportation has detracted from quality of life



Smart Growth and Smart Transportation

## Questions to Ask Yourself...

**What is the problem we are trying to solve?**

**Do I have enough information to understand what the problem is and the potential range of solutions? What is the vision of the area?**

**What is the role of the road today and in the future? Who are the users?**





## Questions to Ask Yourself...

**What is the context of the road today? What will the context be in the future?**

**Is it a transportation problem or a land use? Who can help?**





## Questions to Ask Yourself...

## What are the potential transportation and land use solutions?

## How can I get out in front of future problems?

