

ICLEI

Local
Governments
for Sustainability



Ben Rasmussen
Senior Program Officer
ICLEI – Local Governments for Sustainability

Transportation Energy Use Workgroup
Delaware Governor's Energy Advisory Council
Dover, DE, June 25, 2008

Agenda

- What is ICLEI and what do we do
- VMT Reduction Measures
 - Land Use, Transit, TDM
- VMT Reduction Actions
 - State, Regional, Local





Mission

Our mission is to build, serve and drive a movement of local governments to advance deep reductions in greenhouse gas emissions and achieve tangible improvements in local sustainability.



Our History

- Founded in 1990 by local governments from around the world
- 1990 World Congress - 200+ local governments from 43 countries
- In 1993 we began Cities for Climate Protection
- First U.S. office opened in 1995



ICLEI USA Network

More than **450 member local governments**
Representing more than **25% of the population**



How do Members Benefit from Working with ICLEI?

- National and international network of peers
- Emissions Analysis Software and Decision Support Tool
- ICLEI Trainings and Events
- Technical, policy, and communications assistance
- Resources, resources, resources



ICLEI Toolkits, Publications, Templates

- Climate Action Handbook
- Adaptation Guidebook
- Milestone Guide
- Transportation and Land Use Toolkit
- Urban Forestry Toolkit
- Green Fleets Guide
- Local Climate Programs
- Example Ordinances
- Resolution, Inventory and Action Plan Templates

7

www.icleiusa.org

U.S. MAYORS' CLIMATE PROTECTION AGREEMENT



CLIMATE ACTION HANDBOOK



A Two-Pronged Approach

Mitigation:

Focuses on GHG reduction programs beginning with baseline inventories, goal setting, action plan development and implementation.

Adaptation:

Focuses on building resiliency to climate change impacts through identifying vulnerable sectors, goal setting, and preparedness planning.

Climate Mitigation at the Local Level

Solid Waste



Energy Use

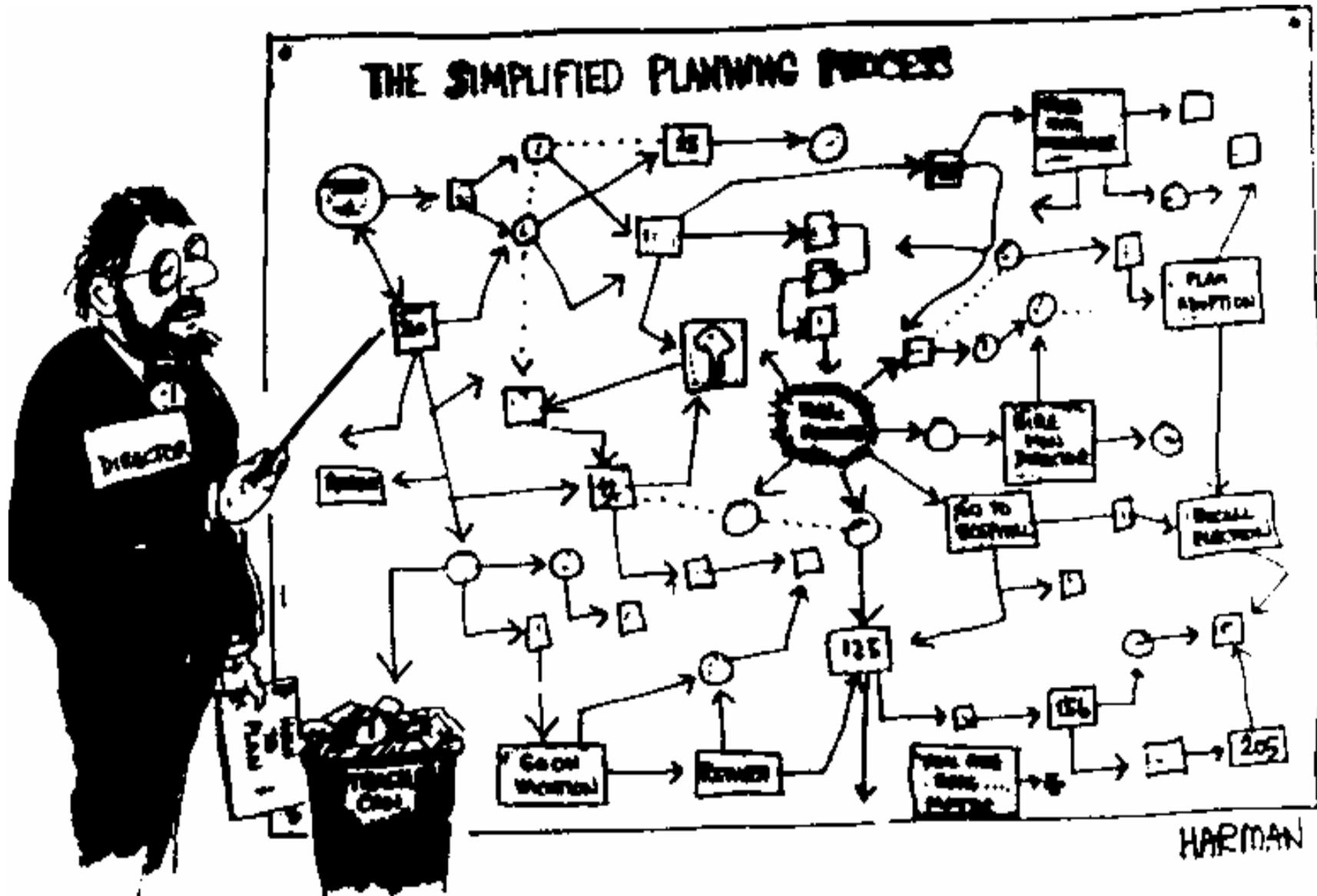


Transportation

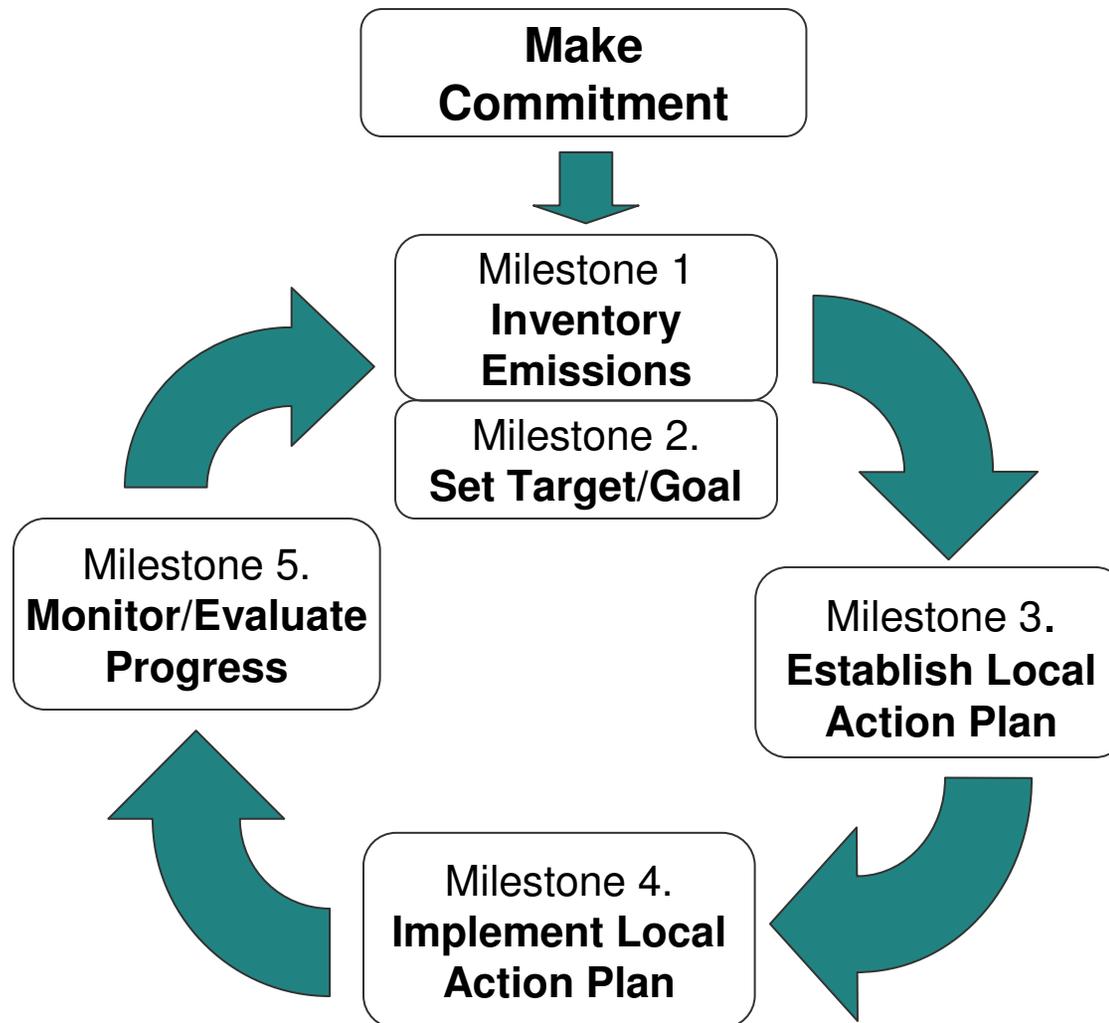


Local government policies affect all major sources of greenhouse gas emissions

“Planning is best done in advance”
- Anonymous



The 5 Milestone Process





Community Analysis

Community Measures

Government Analysis

Government Measures

STAPPA/ALAPCO and ICLEI's

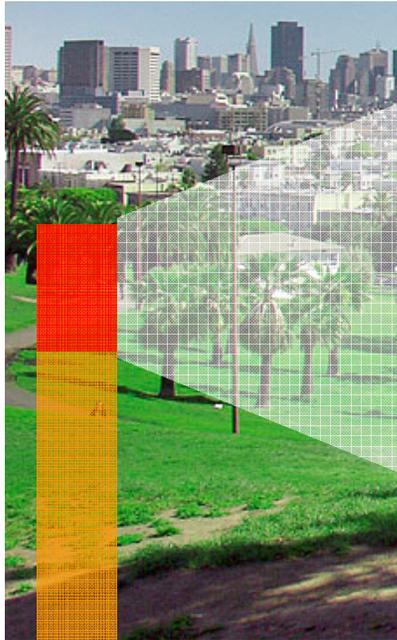
Clean Air and Climate Protection Software

State and Territorial Air Pollution Program Administrators and
Association of Local Air Pollution Control Officials

International Council for Local Environmental Initiatives

Milestones 1-3: Baseline, Targets, Action Plan

Commercial Sector Emissions Reductions



30%

Commercial / Indus

Milestone 1: Ba

Milestone 2: 20%

Milestone 3: De

New Construction Energy Codes

- Require higher efficiency HVAC, lighting and window technologies; reduced air infiltration; and appropriate solar orientation
- Implement in 2009
- Anticipated annual savings: 64.5 million kWh
450,000 therms
77,300 tons CO₂e
\$110,404,859

Existing Commercial Facility Retrofits

- Offer free facility energy audits and expert advice, along with financial incentives for HVAC and lighting equipment improvements
- Implement in 2008
- Anticipated annual savings: 80 million kWh
700,000 therms
105,200 tons CO₂e
\$79,407,558

Install Solar Photovoltaic Panels

- Install photovoltaic panels on all municipal facilities where feasible
- Implement in 2007
- Anticipated annual savings: 140,000 kWh
103 tons CO₂e
\$14,000

Local Government Greenhouse Gas Protocol

Guidance on:

- What to count
 - How to count
 - How to represent
-
- Community-scale analysis
 - Government operations
-
- Emissions inventories
 - Program and policy-based emissions reductions



On the Horizon...

- The Climate and Air Pollution Planning Assistant
- Next Generation Software
- STAR Community Index
- Media and Communications Support
- Enhanced Website
- ICLEI Training Sessions and Events



ICLEI Local Action Summit 2008 • North America

Experience. Leadership. Solutions.

Transportation and Climate Change Project

June 10, 2008 – Hartford, CT



A Vision of Future Transportation Along the Connecticut River Valley



Connecticut River, CT

Imagine leaving your car at home as you travel by train along the Connecticut River Valley corridor from town to town and city to city. Envision multi-modal rail stations surrounded by a healthy mix of stores and residences in communities from New Haven, CT to northern Vermont, with easy connections to major destinations, such as Bradley International Airport.

This is the vision of many of the communities and regional planning organizations along the Connecticut River Valley corridor. These communities want to improve the region's quality of life and decrease greenhouse gas emissions by reducing car and truck trips along the corridor. In order to come to fruition, the vision requires immediate support and investment.



Holyoke, MA



Greenfield, MA

Working with ICLEI – Local Governments for Sustainability, communities and regional planning organizations in Connecticut, Massachusetts, New Hampshire, and Vermont developed a vision to involve more communities along the corridor in the transportation projects (listed on the back of this page), and are actively involving and educating state and other decision-makers about the region's desire. To help ensure the successful integration of rail into the future of the corridor, the shared vision should be integrated into existing long term local and regional comprehensive land use and transportation plans.



Greenfield, MA



Brattleboro, VT



Northampton, MA

Some Specifics

By the year 2020, the communities and regional planning organizations identified several projects that they would like to see completed or underway.

Rail projects include:

- Frequent passenger rail service along the Connecticut River Valley corridor
- Re-alignment of the rail corridor to bypass the Palmer detour
- Bus connections to and from areas throughout the communities along the corridor and nearby major destinations, including Bradley International Airport
- Increased freight rail service to industry and businesses

Stations:

- Are multi-modal transportation centers served by bus and train
- Have bicycle and pedestrian connections to surrounding areas

Communities with stations:

- Transit oriented development – a dense mix of stores, jobs, and residences – is encouraged in the area surrounding the station
- Denser residential and/or employment areas in the community are planned where bus connections to stations are desired
- Smart growth principles are employed where possible

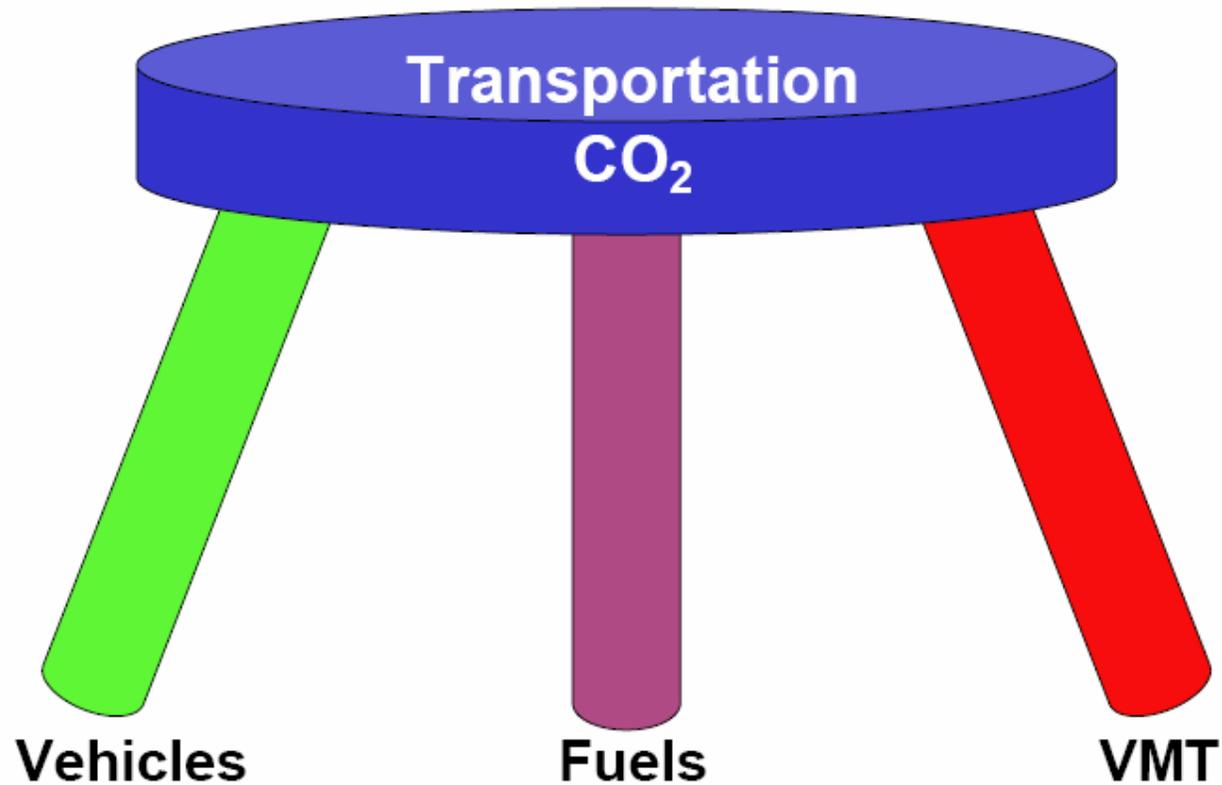
For More Information

For inquiries or to receive more information about the Transportation and Climate Change project, please send an email to ICLEI's staff lead, Ben Rasmussen, at ben.rasmussen@iclei.org or call 617-850-9042.

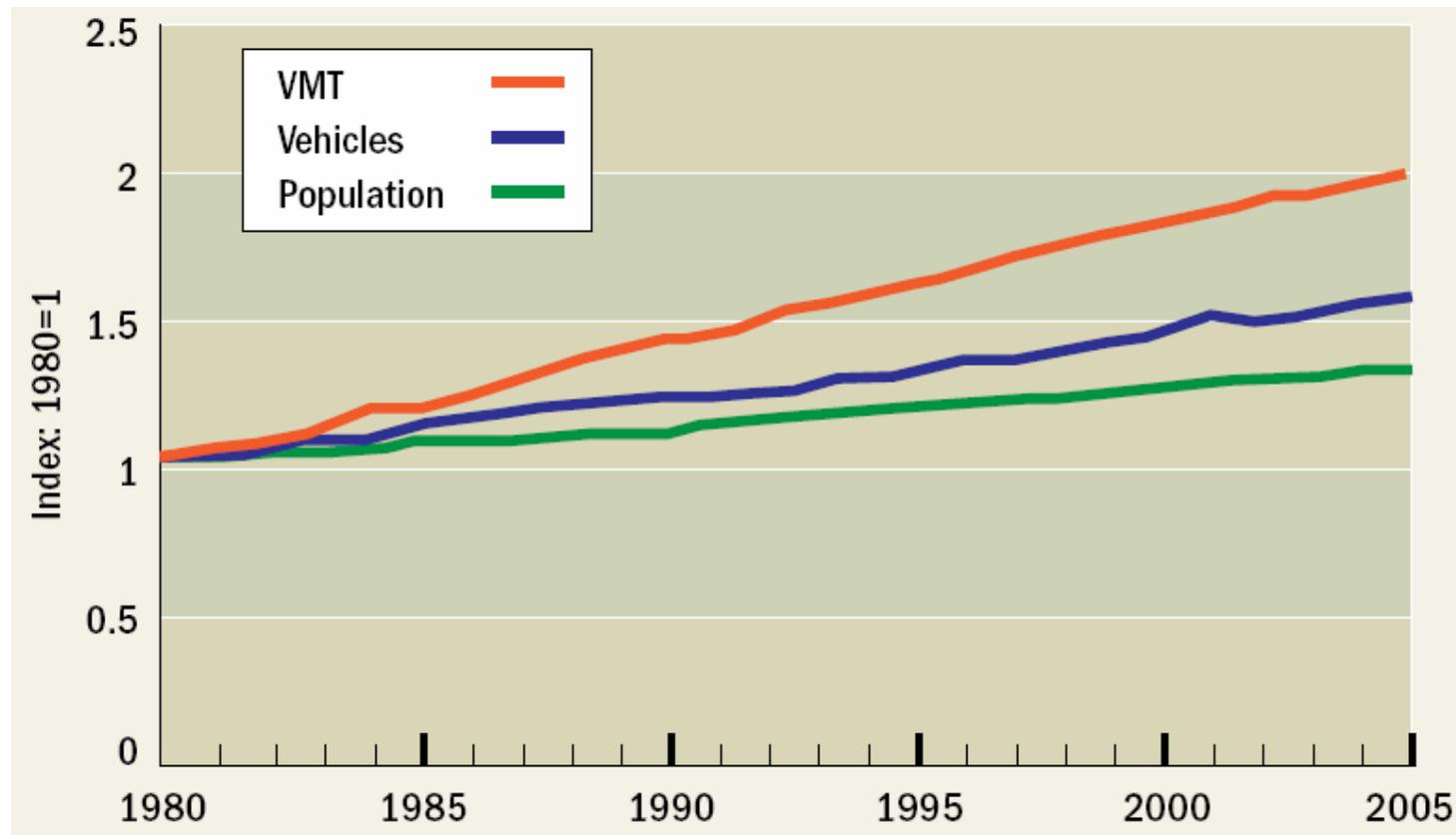


Map based on image from Hartford-Springfield Economic Partnership

Three Legs of the Stool

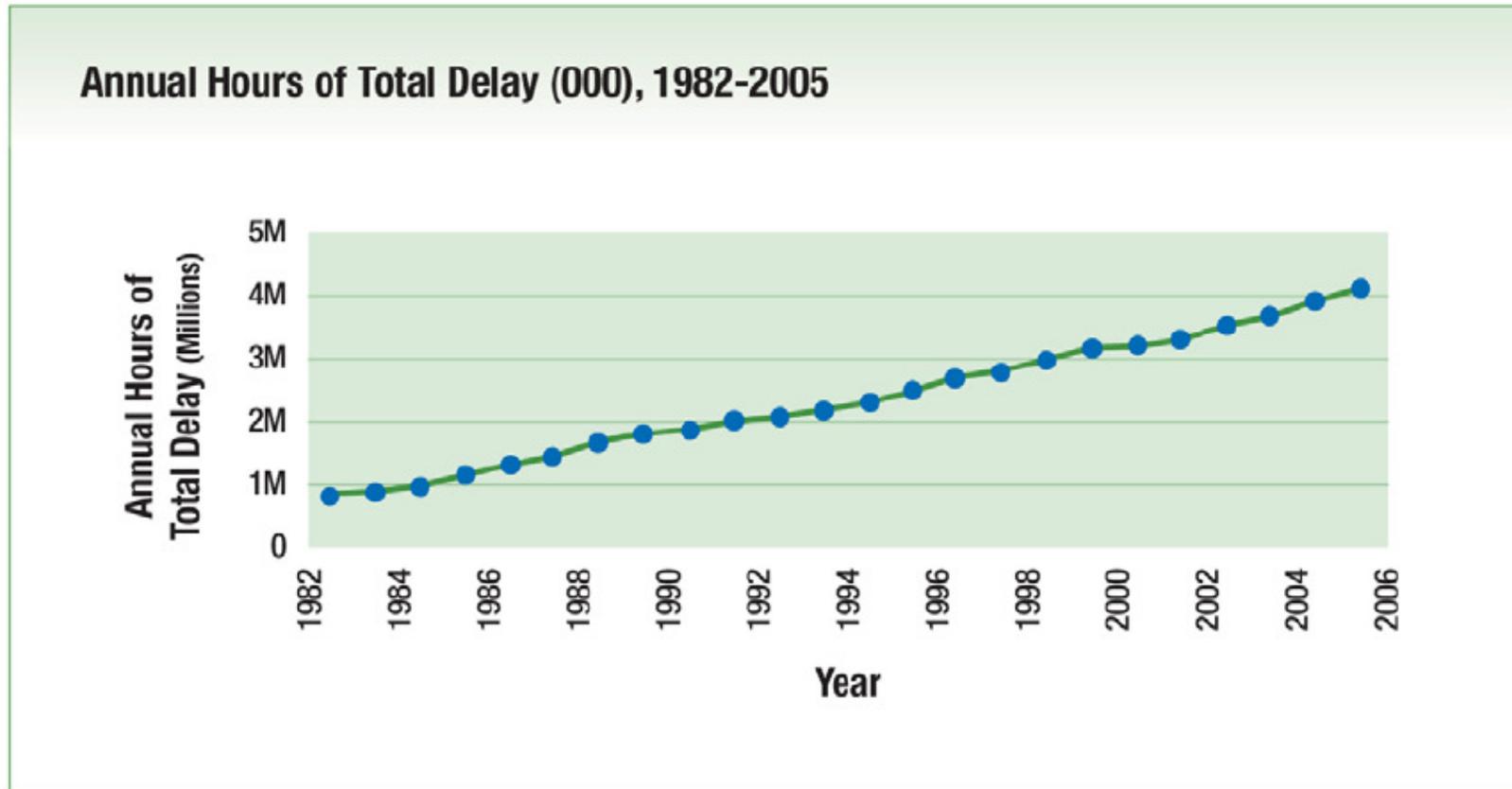


Growth of Population, Vehicle Registration, and VMT in the US relative to 1980 Values



Source: Federal Highway Administration (FHWA). "Vehicle Registrations, Fuel Consumption, and Vehicle Miles of Travel as Indices," Highway Statistics 2005. Washington, D.C.: U.S. Department of Transportation, 2006, <http://www.fhwa.dot.gov/policy/ohim/hs05/htm/mvfvm.htm>.

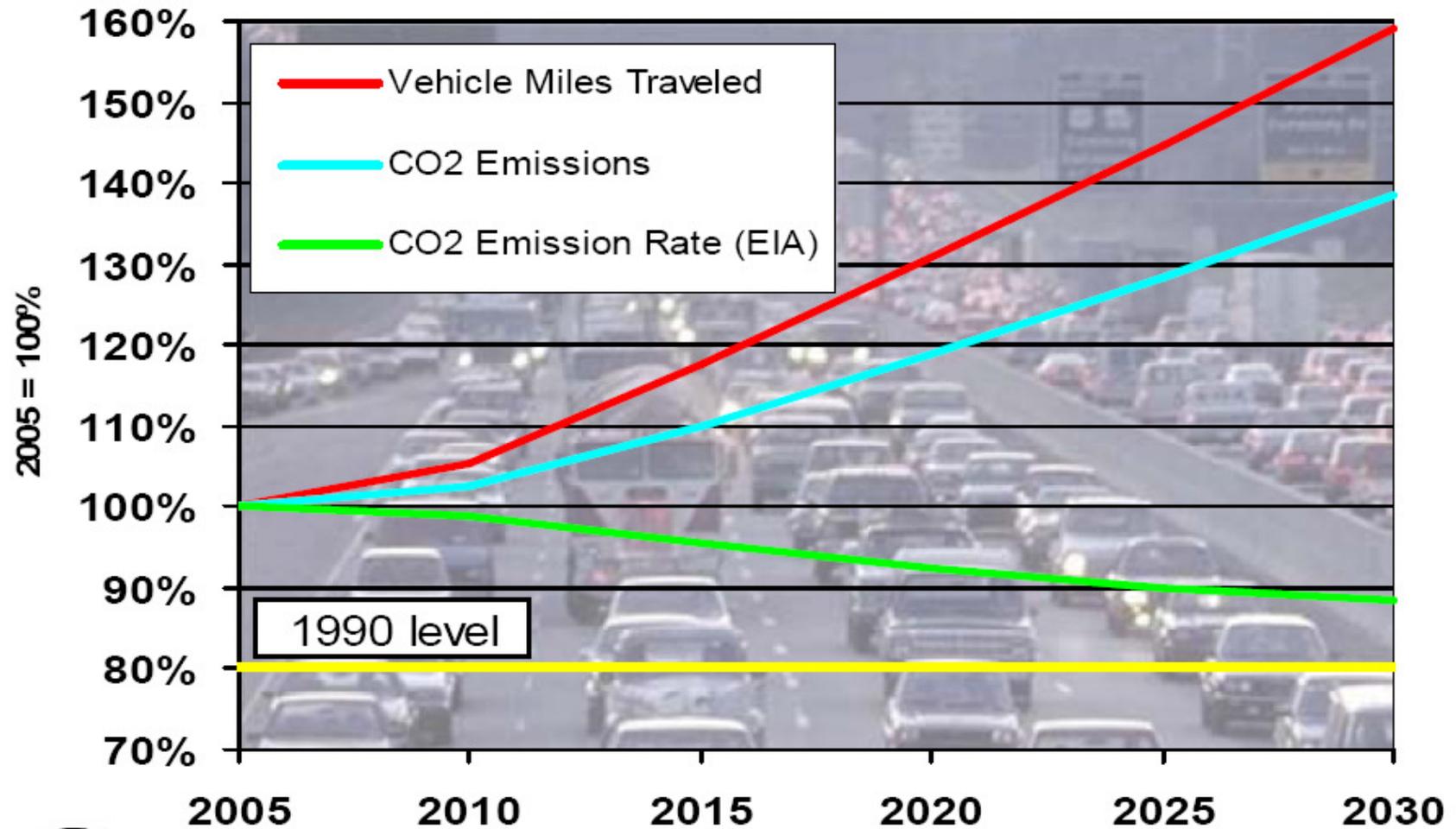
Congestion Continues to Rise as Well



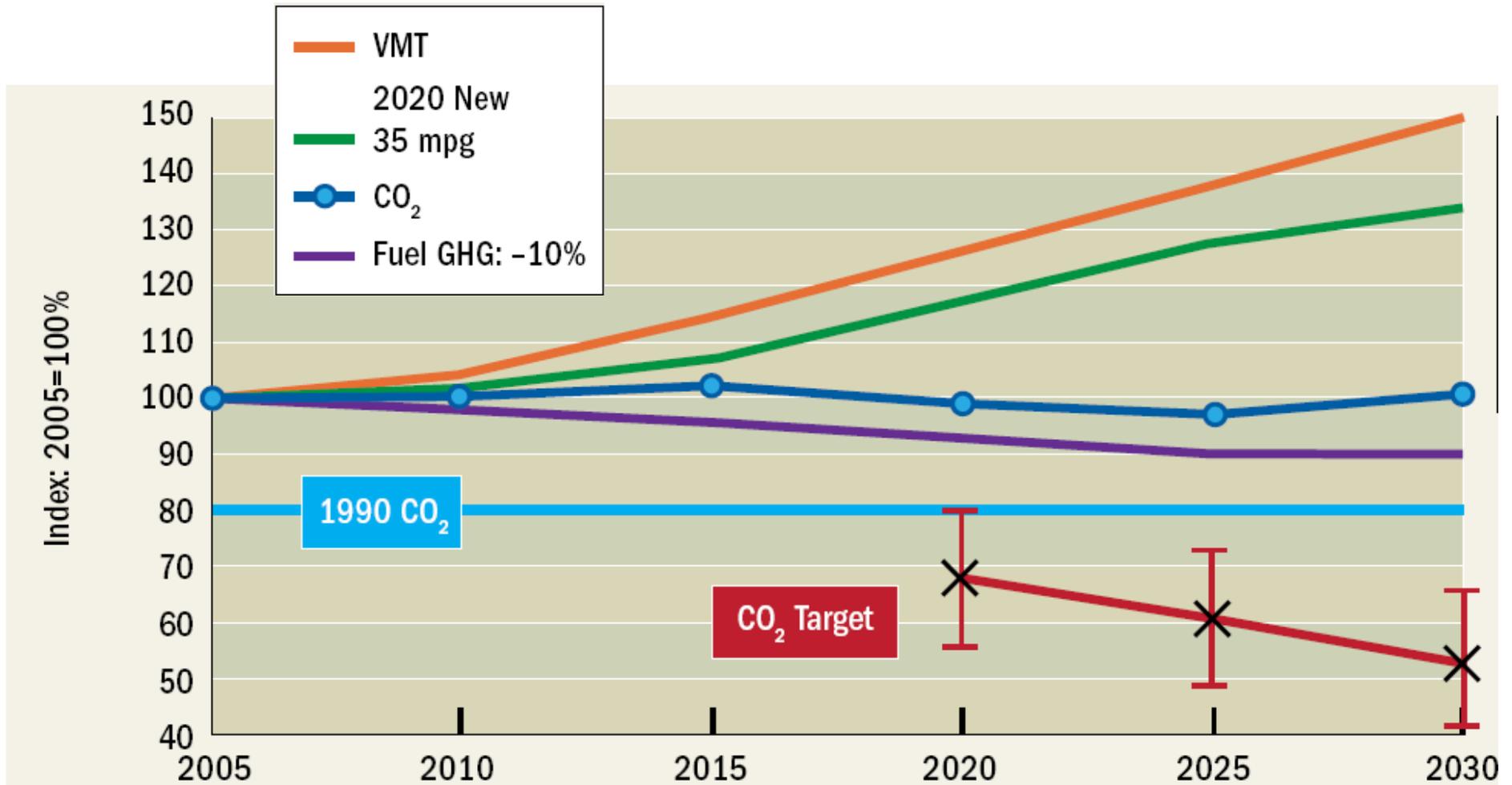
Source: Texas Transportation Institute, 2005 Congestion Study.

As cited in APTA, *Public Transportation's Contribution to U.S. Greenhouse Gas Reduction*, 2007

Projected Growth

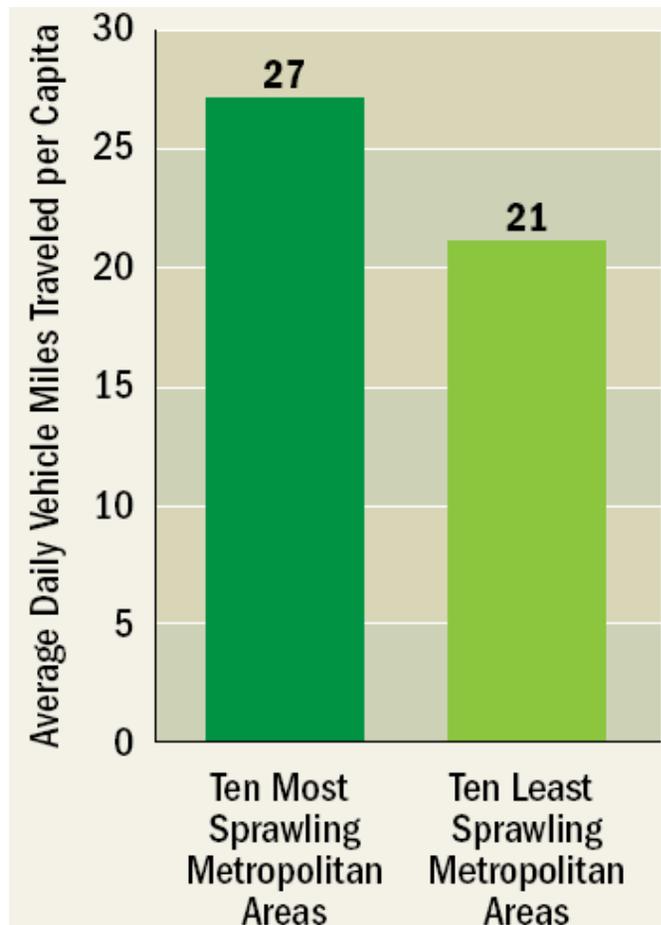


Projected Growth with New/Proposed Federal Standards



Source: S. Winkelman (Center for Clean Air Policy) calculations based on EIA's Annual Energy Outlook 2008 (Early Release) and the Energy Independence and Security Act of 2007.

The Transportation - Land Use Connection



“When viewed in total, the evidence on land use and driving shows that compact development will reduce the need to drive between 20 and 40 percent, as compared with development at the outer suburban edge with isolated homes, workplaces, and other destinations. So, as a rule of thumb, it is realistic to assume a 30 percent cut in VMT with compact development.”

Growing Cooler, 2008.

Source: R. Ewing, R. Pendall, and D. Chen. *Measuring Sprawl and Its Impact*. Washington, D.C.: Smart Growth America/U.S. Environmental Protection Agency, 2002, p. 18.

Street Design

2 km drive

vs.

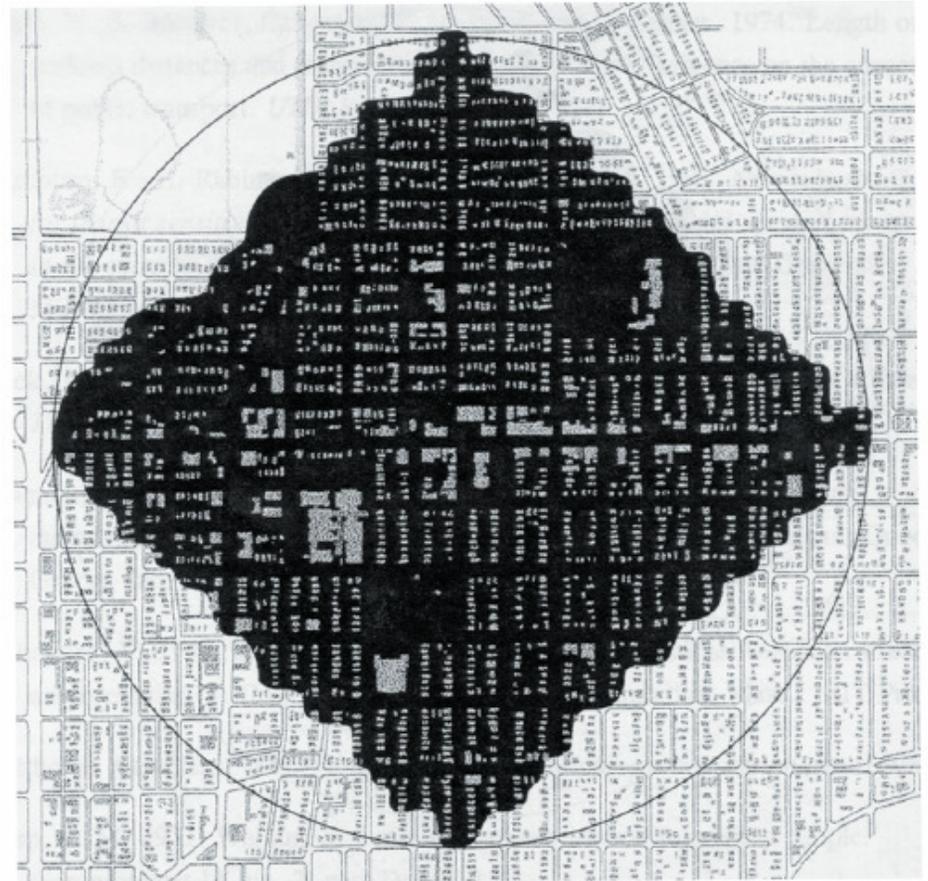
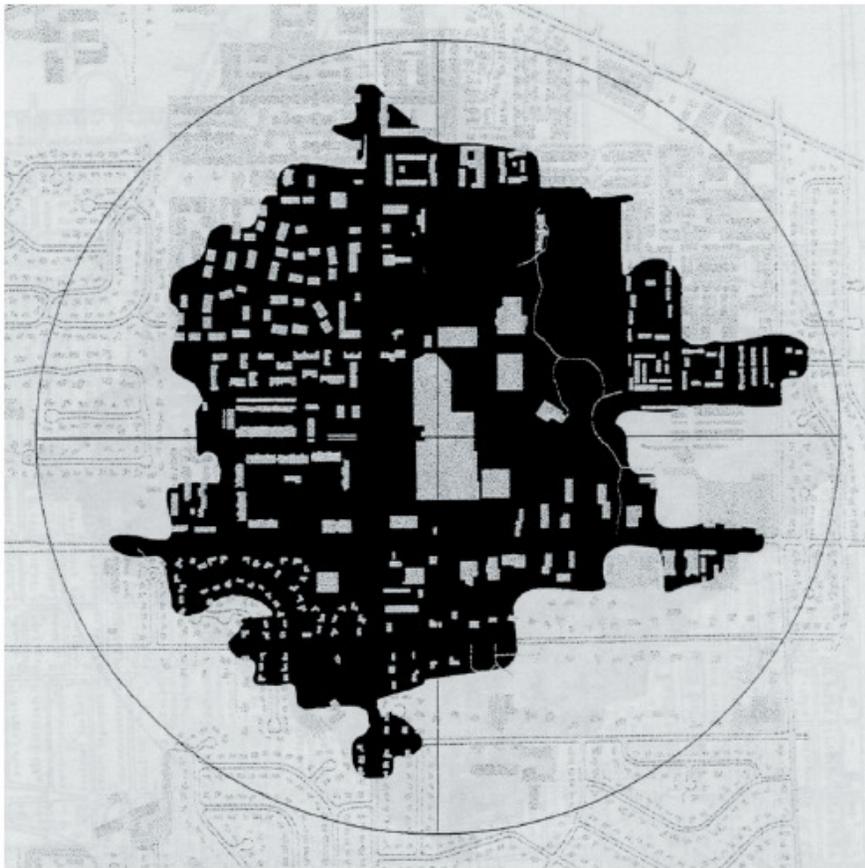
1 km walk



Source: Larry Frank

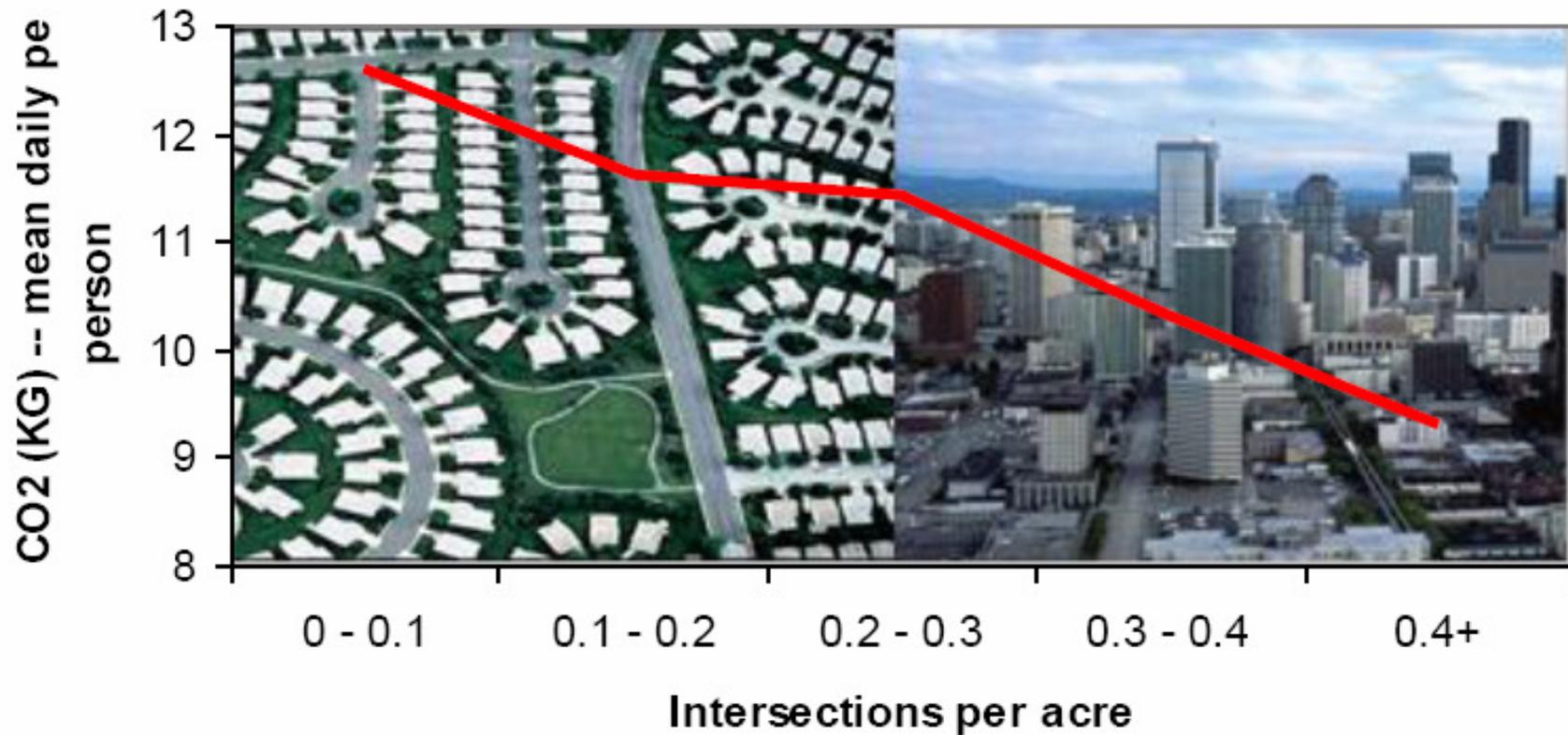
Street Connectivity

Destinations within 1/4 Mile of Center for Contrasting Street Networks in Seattle



SOURCE: MOUDON ET AL. 1997.

Street Connectivity



Source: Frank, Winkelman, Chapman, Cavage and Leinberger. Brookings Institute, Nov. 07.

Urban Form

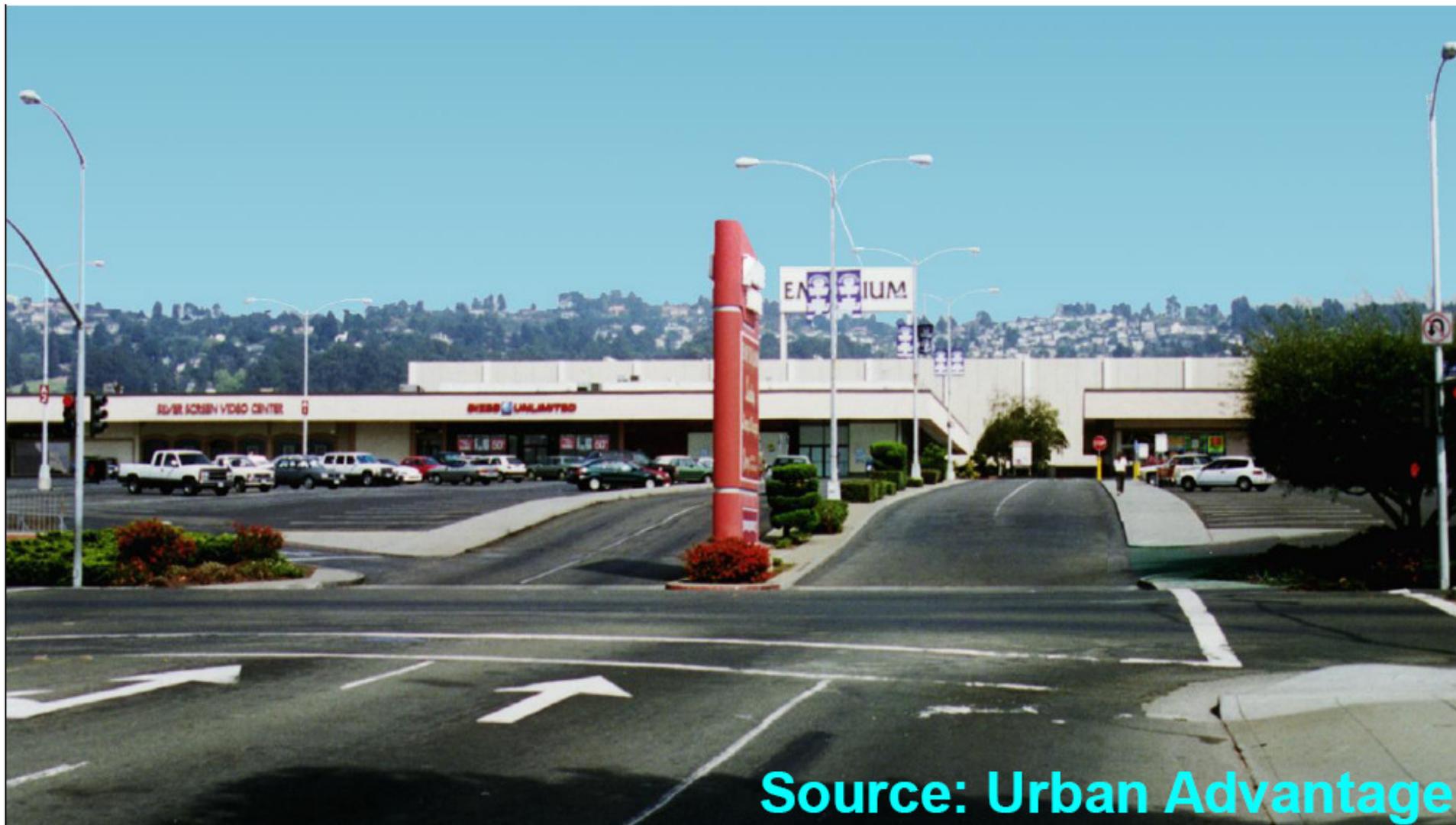
“Nearly half of what will be the built environment in 2030 doesn’t even exist yet, giving the current generation a vital opportunity to reshape future development.”

Arthur C. Nelson, “Planning for a New Era,” *Journal of the American Planning Association*, Fall 2006.

About 20% of non-residential space turns over each decade



Present

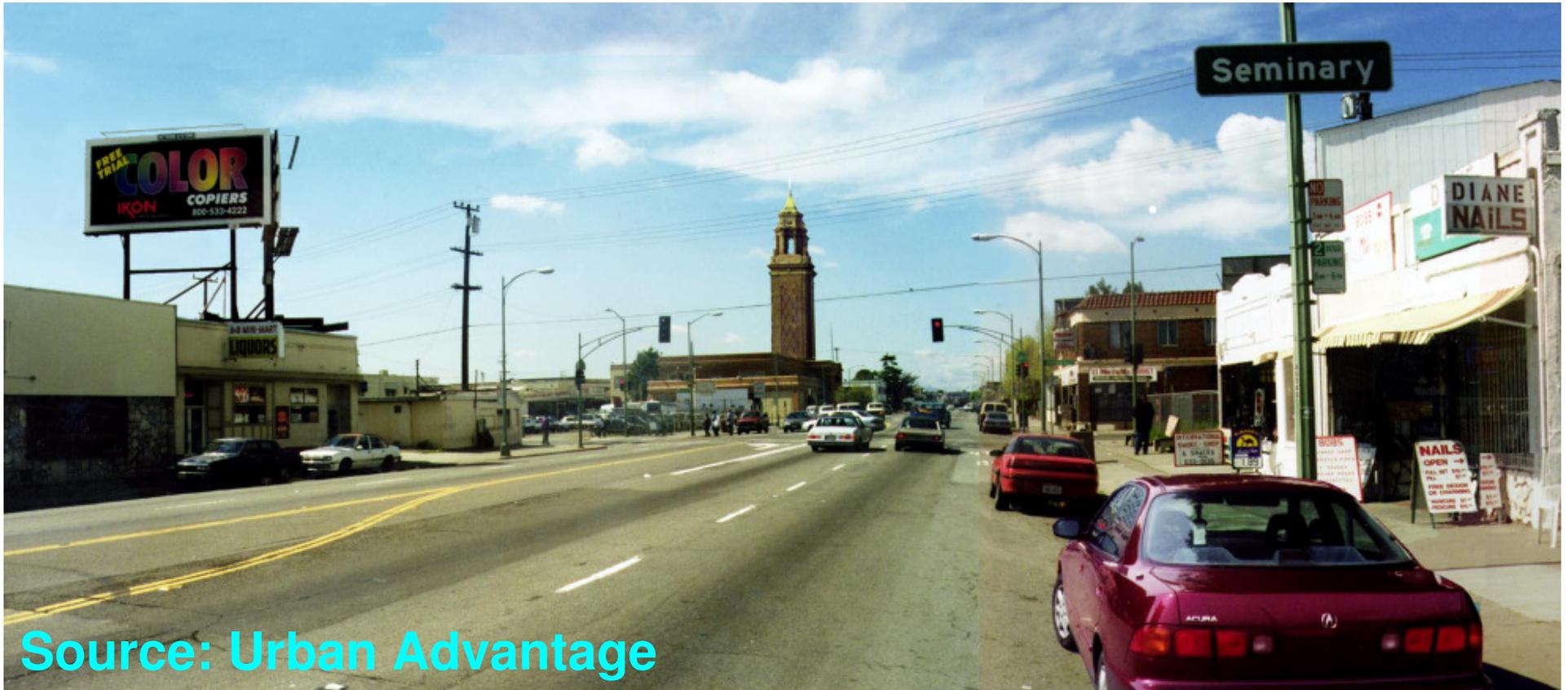


Potential



Source: Urban Advantage

Present



Source: Urban Advantage

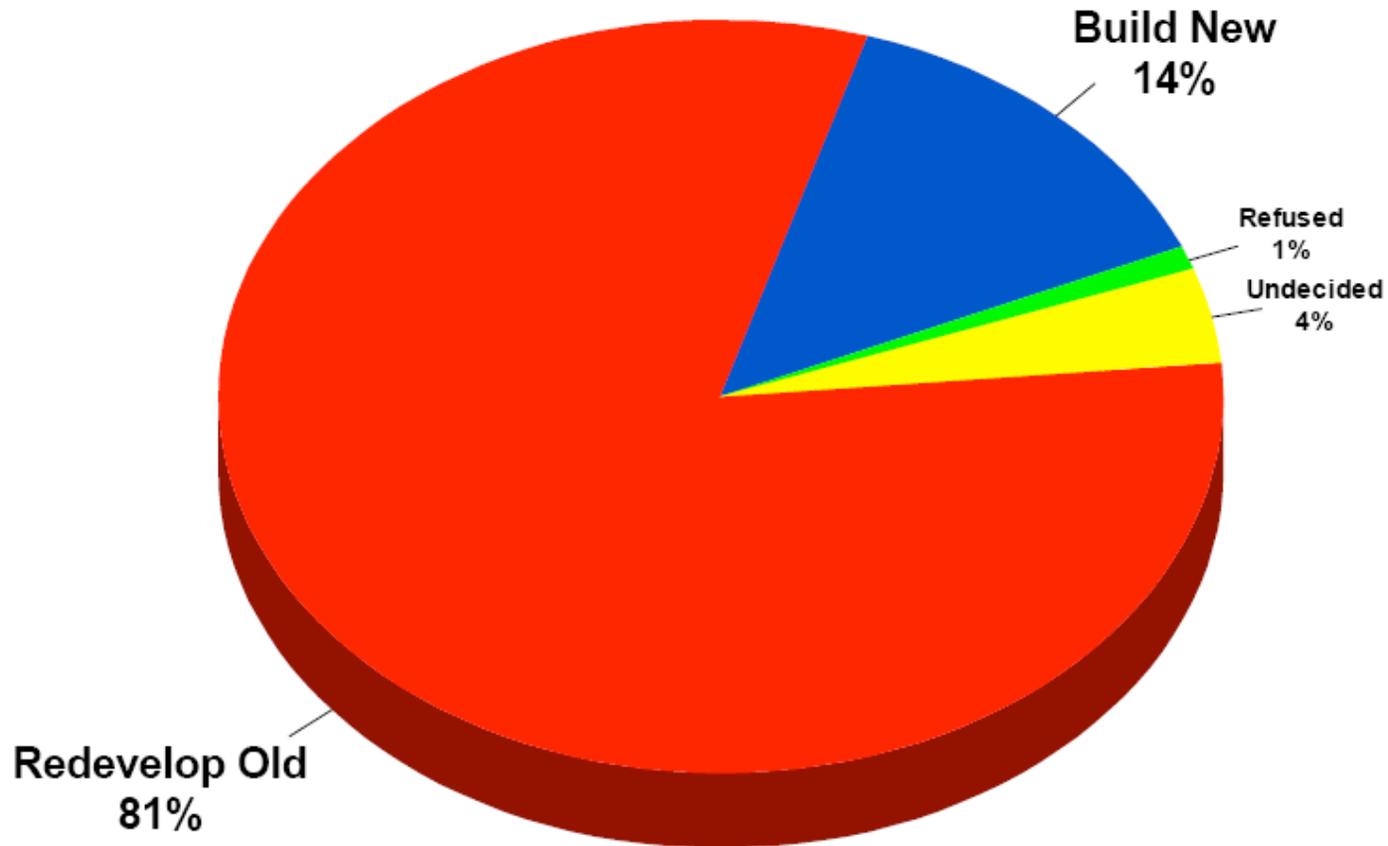
Potential



An average HH in a compact county uses 20% less energy than an average HH in a sprawling county

Eighty-one percent of voters want to redevelop older areas rather than building new.

“The population of the United States is expected to increase from 300 million to 400 million by 2050. I am going to read you two statements, please tell me which approach do you prefer to accommodate this growth... Continue to build new suburbs on the edge of the existing suburbs ...or... Redevelop older urban and suburban areas with additional development, that is, build new housing and commercial development in already developed areas. Which approach do you prefer?”



Less of this...

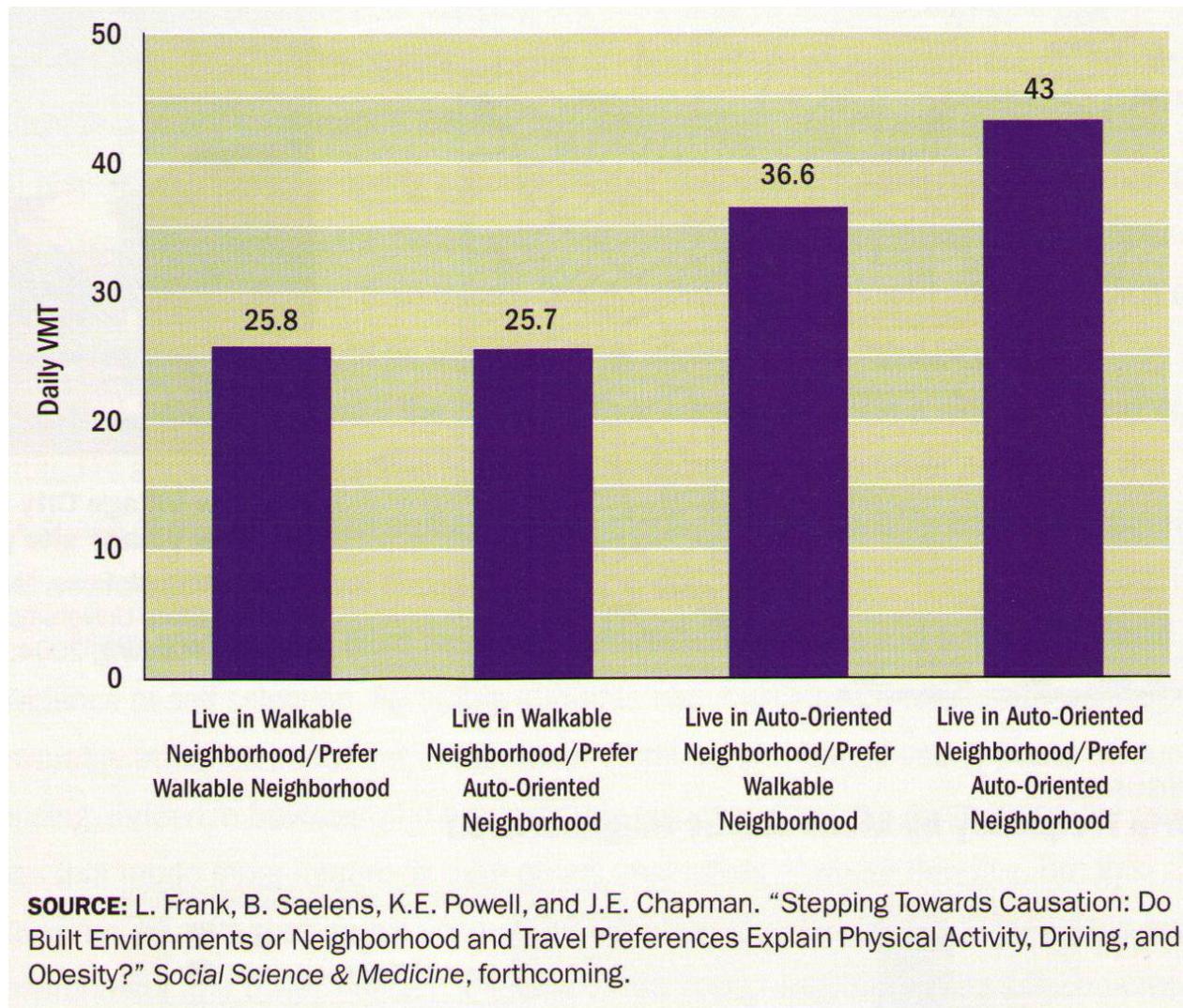


...and more of this

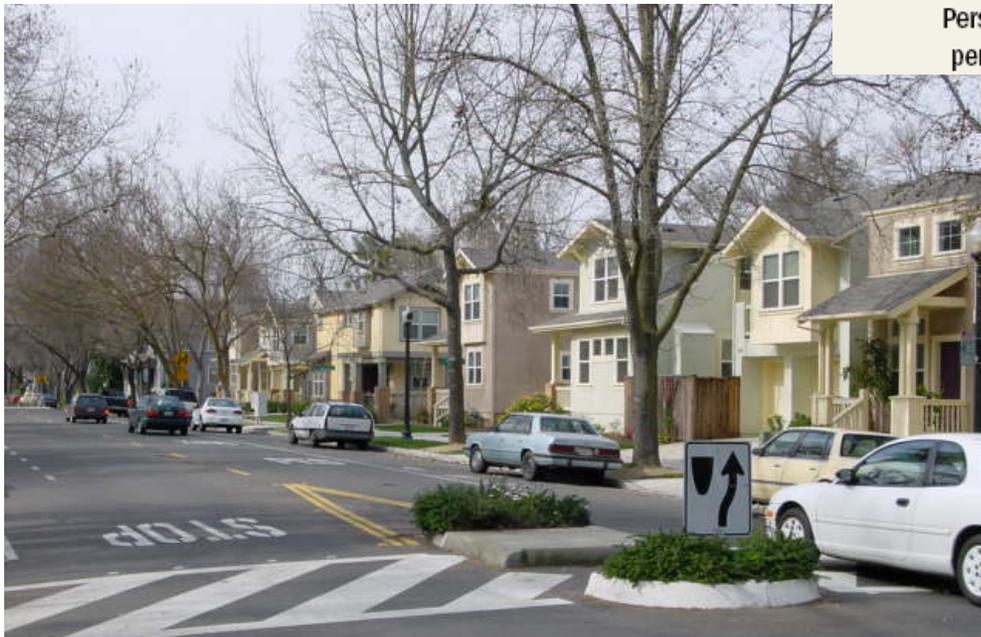
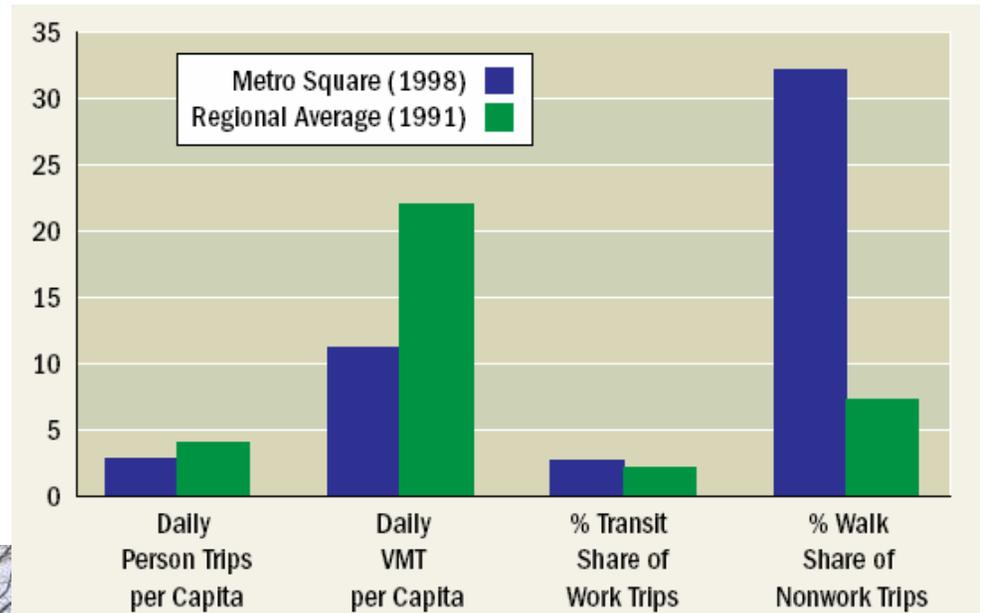


How can Planning Impact VMT?

Average VMT by Neighborhood Type and Residential Preference



Metro Square, Sacramento



Source: *Growing Cooler*, 2008

Atlantic Station

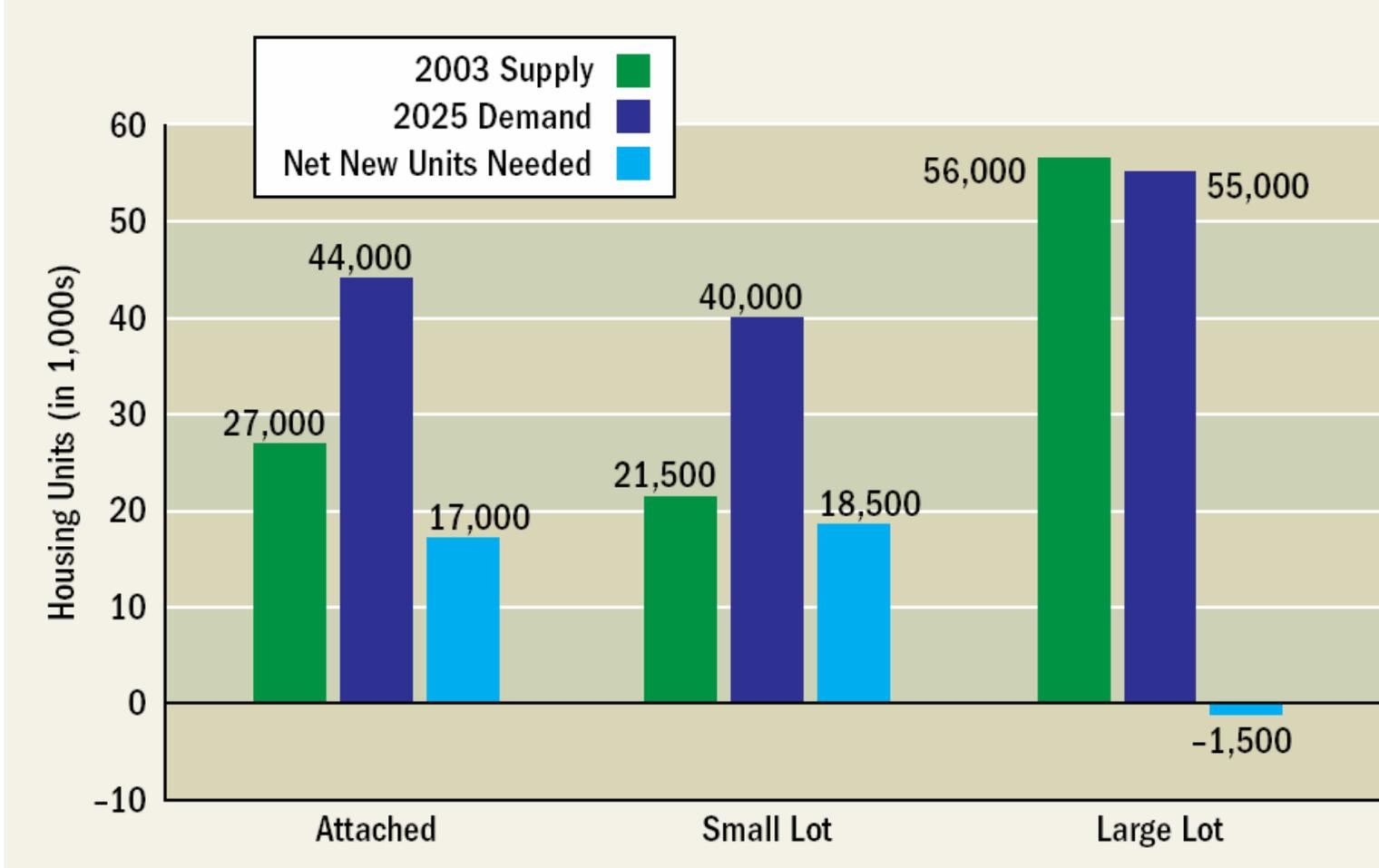
- Atlanta, GA
 - Regional = 32 VMT
 - Residents = 8 VMT
 - Employees = 11 VMT



JACOBY DEVELOPMENT COMPANY

Supply vs. Demand

2003 Housing Supply versus 2025 Housing Demand



Source: A.C. Nelson. "Leadership in a New Era." *Journal of the American Planning Association*. Vol. 72, Issue 4, 2006. pgs. 393-407.

Parking and TDM



Victoria Transport Policy Institute

Home | Our Approach | TDM Encyclopedia | Documents

Search:

<http://www.vtpi.org/tdm/>

Online TDM Encyclopedia

Updated September 2007

Transportation Demand Management (TDM, also called Mobility Management) is a general term for strategies that result in more efficient use of transportation resources. This Encyclopedia is a **comprehensive source of information about innovative management solutions** to transportation problems. It provides detailed information on dozens of demand management strategies, plus general information on TDM planning and evaluation techniques. It is produced by the **Victoria Transport Policy Institute** to increase understanding and implementation of TDM.

Contents

- Overview
- Strategies To Achieve Specific Objectives
- Best Strategies For Various Organizations and Stakeholder Groups
- TDM Strategies
 - Improved Transport Options
 - Incentives To Use Alternative Modes and Reduce Driving
 - Parking and Land Use Management
 - Policy And Institutional Reforms
- TDM Programs and Program Support
- TDM Planning and Evaluation
- Reference Information

Cambridge PTDM Ordinance

- 1998 Parking and Transportation Demand Management (PTDM) Ordinance – requires SOV mode splits of 40-60%
- Most projects that include new non-residential parking require a PTDM plan
- All projects subject to the Ordinance must have an approved PTDM plan before obtaining necessary permits

PTDM Plan Elements

- Transit and vanpool subsidies
- Pre-tax deduction of transit and vanpool fares
- Carpool and vanpool matching service
- Shower and locker facilities for bicyclists and walkers
- Secure and weatherproof bicycle parking
- Carpool and vanpool preferential parking
- On-site carsharing vehicle
- Employee shuttle
- Emergency Ride Home (ERH) program
- Commuter information center (bulletin board, website, brochure table)
- Employee Transportation Coordinator (ETC)
- Flexible or alternative work hours
- Telecommuting program

Ordinance Coverage

- > 7.5 million square feet of commercial development subject to annual mode share monitoring
 - Covers ~35,000 employees and 10,000 graduate students
 - In 2007, 69% of monitored projects met or surpassed their mode split goals
- In 2006, 37 non-residential affected development projects prevented an estimated 49.2 million VMT
 - = GHG emissions of about 25,200 lbs per year

Results (Census 2000)

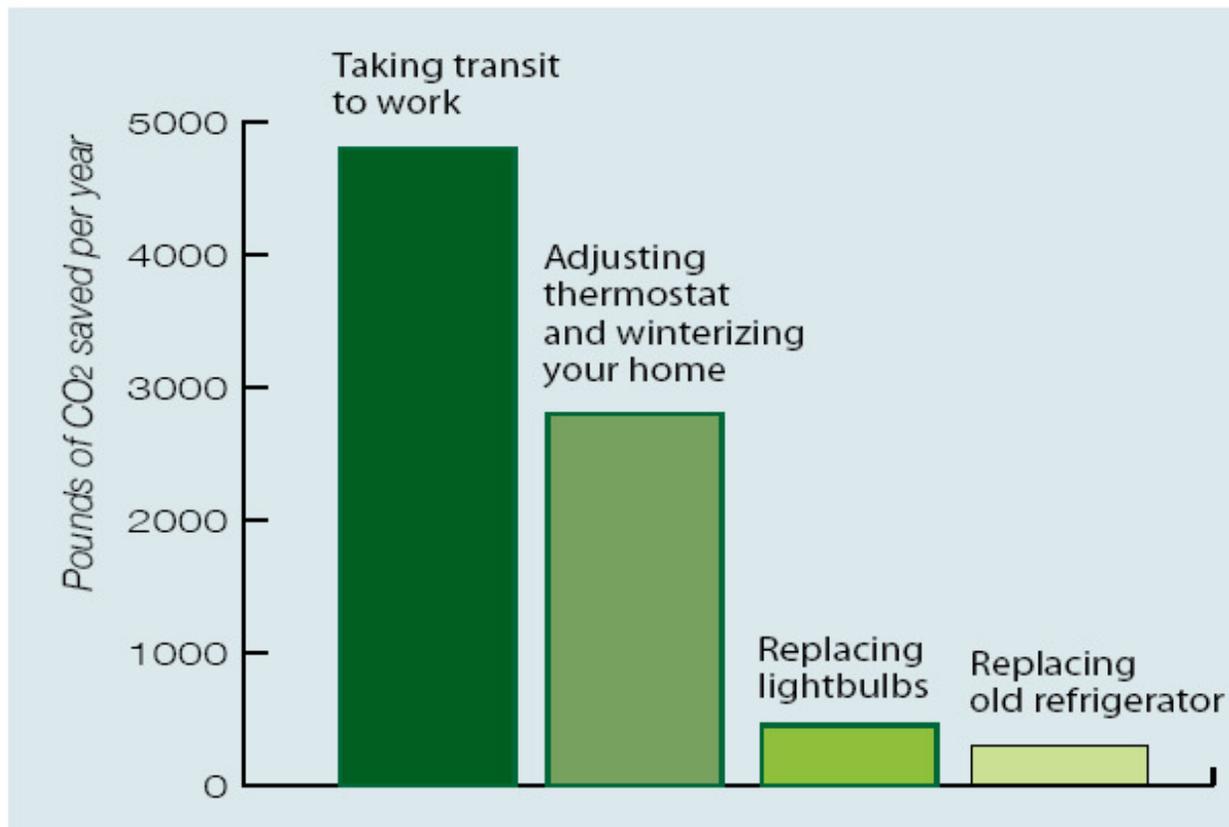
- Non-automobile commuters:
 - Cambridge places 2nd at 56% after NYC at 65%
- Recently rated “Best Walking City in America”
 - At 26% Cambridge has highest percentage of residents who walk to work in the country
 - Of those who both live and work in the city, 45% walk
- Bicycle commuting:
 - At 4%, is among highest in the country
 - Recent statistics indicate a 70% increase in the number of bikes on the road from 2002 to 2006

Parking Pricing



Transit

Commuting by Public Transportation—One of the Most Significant Actions to Reduce Household Carbon Emissions



By taking existing public transportation instead of driving a car, a single person saves 4,800 pounds of CO₂ per year. Source: Public Transportation's Contribution to U.S. Greenhouse Gas Reduction ⁴

Impact of Transit on CO₂ Emissions

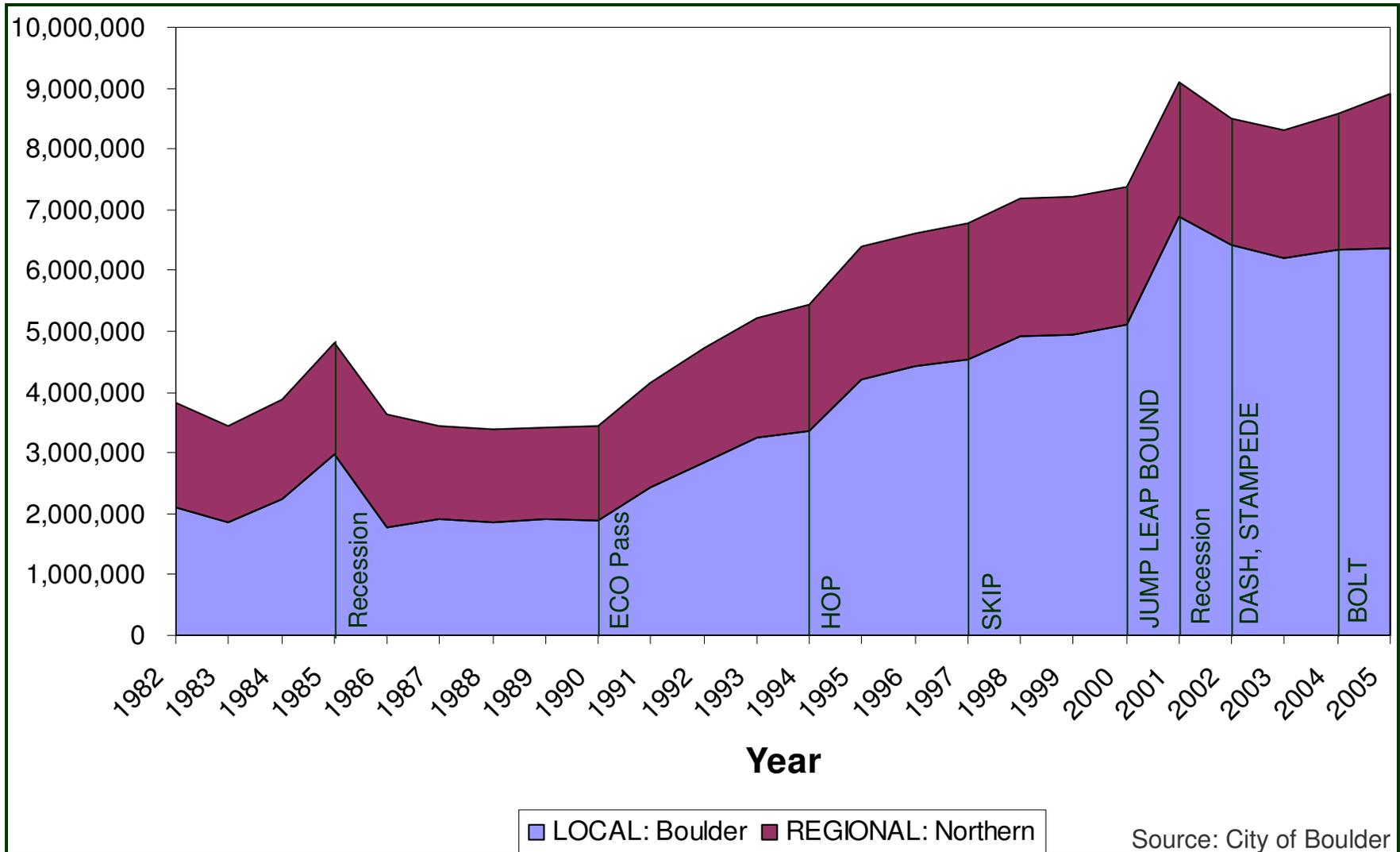
- How much net CO₂ is public transportation currently saving?

		Metric Tonnes
1.	Carbon dioxide emissions from personal vehicles if no transit service	16.2 million
2.	Carbon dioxide emissions from public transportation	-12.3 million
3.	Net carbon dioxide saved from public transportation	3.9 million
4.	Additional carbon dioxide saved from transit reduced congestion	+3.0 million
5.	Total carbon dioxide savings from public transportation	6.9 million

Source: APTA, *Public Transportation's Contribution to U.S. Greenhouse Gas Reduction*, 2007

Boulder – Transit Ridership

Boulder: Yearly Boardings – Local and Regional



The Community Transit Network

- HOP, SKIP, JUMP, BOUND, DASH, STAMPEDE, BOLT
- 10 minute frequencies – no schedule required
- Colorful graphics
- From hub & spoke to grid
- Eco Passes
- Marketing (including maps and schedules)
- Community process





Get on the bus for less.
Save 50%.*



Discover the power of the Pass.

This annual bus pass is a popular employee benefit that is tax-free to employees and tax deductible for your business.

For more information, call RTD at **303.299.2376** and refer to BCBR offer. Or visit **RTD-Denver.com**.

A partnership of:



*50% discount available for first-time Eco Pass companies in the city of Boulder or along the Diagonal Highway.

Did You Use Your Eco Pass Today?
For Eco Pass Info: rtd-denver.com

INFORMATION 303.299.6000

A Partnership of **RTD** and **GO BOULDER**

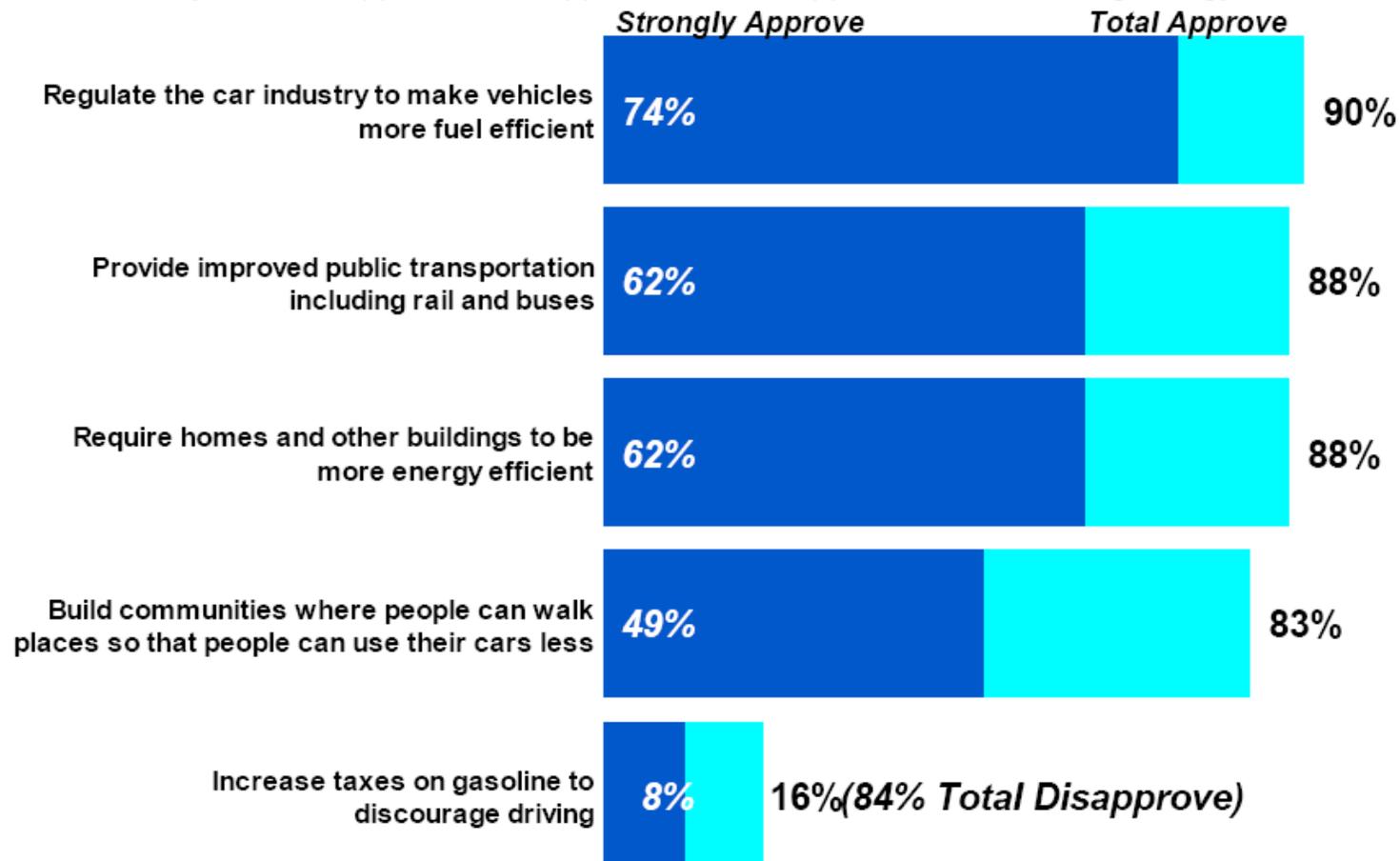
2005 Boulder Valley Employee Survey Transit Highlights

- Transit use among employees increased from 1.7% in 1990 to 9.5% in 2005
 - 2% to 15% for Boulder residents over the same time period
 - 1% to 6% for non-resident employees
- Employees holding Eco Passes increased between 2001 and 2005 from 21% to 27%
- An employee with an Eco Pass is almost 9x more likely to have ridden a bus for the commute trip in the last year than one without a pass

Demand

Americans see a range of solutions to climate and energy problems; including, transit and walkable commutes.

“Now thinking about the environment... Climate change and energy security are of increasing concern to many people. I will read you a list of approaches to reducing energy use. After each one please tell me if you would approve or disapprove of these approaches to reducing energy use?”



State Actions

- Adopt and suballocate VMT reduction targets to MPOs and localities (Washington State)
- Align state spending with climate and smart growth goals via decision-making criteria
- Reduce local fiscal incentives for high-revenue/low-demand uses
- Adopt a statewide “Complete Streets” policy and funding program
- Require analysis of GHG emissions as part of planning approvals

Adapted from *Growing Cooler*, 2008

State Efforts on Smart Growth & Climate

- California
 - Climate Action Team established a smart growth working group, chaired by CEC
 - Attorney General: General Plans and EIRs should disclose and reduce GHG emissions under CEQA
 - SB375: incentives for smart growth planning
 - Leverage \$40 billion in infrastructure bonds

State Efforts on Smart Growth & Climate

- WA: House Bill 2815
- MA: Large projects must report and mitigate CO2 emissions
- NYSDOT: MPOs report GHGs from TIPs and plans
- NJ DOT: integrating land use into transp planning

New Hampshire

<http://www.des.state.nh.us/ARD/ClimateChange/ActionPlan/index.html>



New Hampshire Department of Environmental Services

Air Resources

Climate Change / Energy Programs

Climate Change Policy Task Force

Climate Change Action Plan for the State of New Hampshire

In December 2007, Governor Lynch issued Executive Order Number 2007-3, which established a Climate Change Policy Task Force and charged the task force with developing a Climate Change Action Plan for the State of New Hampshire. The Executive Order directs the task force to submit the action plan to the Governor by September 1, 2008.

DES is designated as the lead agency for the task force and Commissioner Burack is the appointed chairperson. The first meeting for the task force was held on January 18, 2008. As part of the process to formulate the action plan, DES has formed a number of technical and policy working groups to assist in the development of specific actions for consideration by the task force.

- ◆ [Governor's Press Release and Executive Order 2007-3](#)
- ◆ [Climate Change Policy Task Force Members](#)
- ◆ [Climate Change Action Plan Development Process
Timing and Milestones – Task Force Calendar
Description of Working Groups](#)
- ◆ [Climate Change Action Plan – Draft Outline](#)
- ◆ [Climate Change Research Reports and Resources](#)
- ◆ [Upcoming Task Force and Working Group Meetings](#)
- ◆ [Previous Task Force Meetings](#)

Read more...

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■ [Impacts on New Hampshire](#)

■ [Science](#)

■ [Individuals Taking Action](#)

■ [Municipalities and Schools](#)

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March

New Hampshire

<http://blogs.nh.gov/nhpress2/climate>

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Regional Actions

- Include climate goals in regional transportation plans
- Give funding priority to compact, transit-served areas (MPOs and local governments)
- Redirect transportation funds from road expansion to transit and bike/ped facilities
- Use land use/transportation scenario planning to evaluate growth options

Adapted from *Growing Cooler*, 2008

Regional Actions (cont.)

- Establish a regional transfer of development rights program
- Create a carbon impact fee for new development
- Enhance regional travel models to account for land use/travel interactions
- Assist local governments with land development reforms

Adapted from *Growing Cooler*, 2008

Exemplary MPOs



DELAWARE VALLEY
REGIONAL PLANNING COMMISSION

190 North Independence Mall West
Philadelphia, PA 19106

Telephone: (215) 592-1800
FAX: (215) 592-9125
www.dvrpc.org

Request for Proposals for a Regional Greenhouse Gas Inventory

The Delaware Valley Regional Planning Commission (DVRPC) is issuing a Request for Proposal for a consultant to develop a Greenhouse Gas (GHG) Inventory for the nine-county DVRPC region, allocated where feasible to the county and municipal level.

Scope of Work is attached.

Proposals are due in the contract manager's office for time and date stamping by 4:00 p.m., March 7th, 2008. Submissions may be delivered either physically or electronically. Physical submissions must include one CD containing the proposal in portable document format (PDF), one unbound original with four copies, printed double-sided, submitted in a sealed envelope, clearly marked "Proposal-Greenhouse Gas Inventory", and delivered to John Griffies at the address below. Electronic submissions should be in portable document format (PDF), and sent to John Griffies at the e-mail address below.

Any proposals received after due date and time will be returned unopened. No faxed proposals will be accepted.

DVRPC reserves the right to reject any and all bids, to waive any informalities or irregularities therein, and to accept the proposal that, in the opinion of the Commission, is in its best interest.

Note that this document contains eleven pages.

For Additional Information Please Contact:

*John R. Griffies, Contracts Manager
Delaware Valley Regional Planning Commission
ACP Building, 190 N. Independence Mall West, 8th Floor
Philadelphia, PA 19106-1520
Phone: 215-238-2925
Fax: 215-925-4886
E-mail: jgriffies@dvrpc.org*



VISION 2040

people - prosperity - planet

for General Assembly action on April 24, 2008

Puget Sound Regional Council
PSRC
February 2008

Local Actions

- Develop a local climate action plan
- Change the development rules to allow for higher densities and mixed use
- Favor smart growth projects in the approval process
- Adopt pedestrian-friendly site and building design standards
- Channel growth into compact development areas
- Provide for workforce housing near jobs
- Invest in civic engagement and education

Adapted from *Growing Cooler*, 2008

Hartford, CT



TAKING THE PATH OF LEAST RESISTANCE:



Reducing Hartford's Greenhouse Gas Emissions in the Transportation Sector

Spring 2006

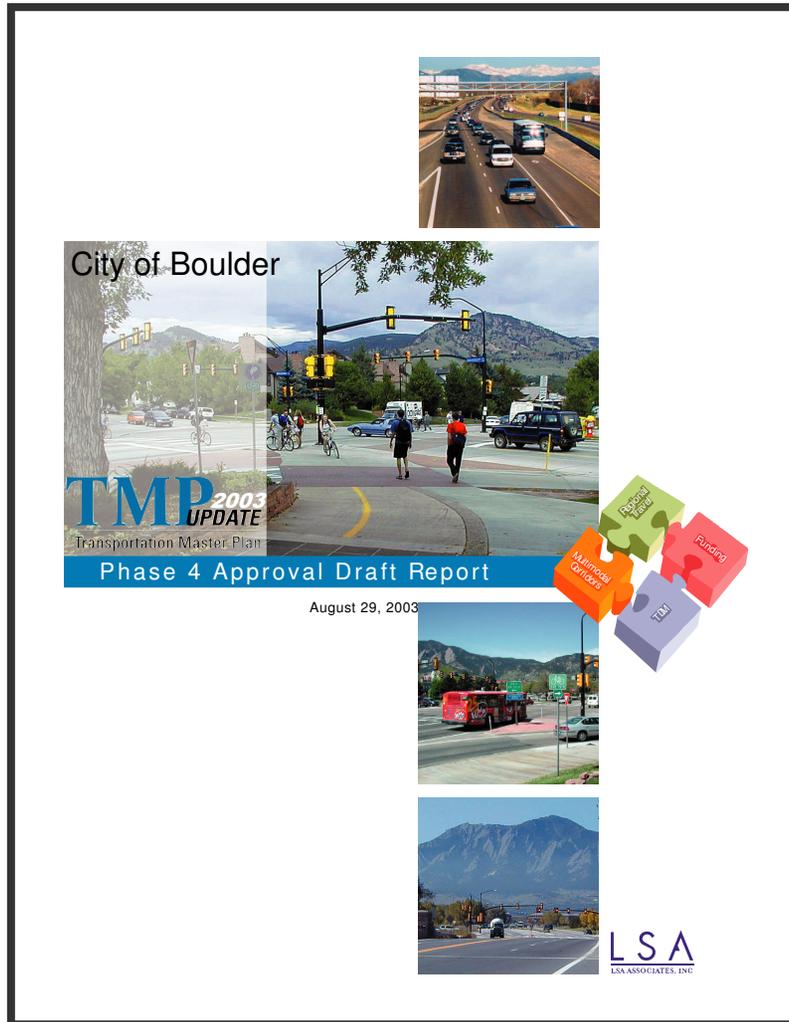


City Of Hartford
Eddie A. Perez, Mayor

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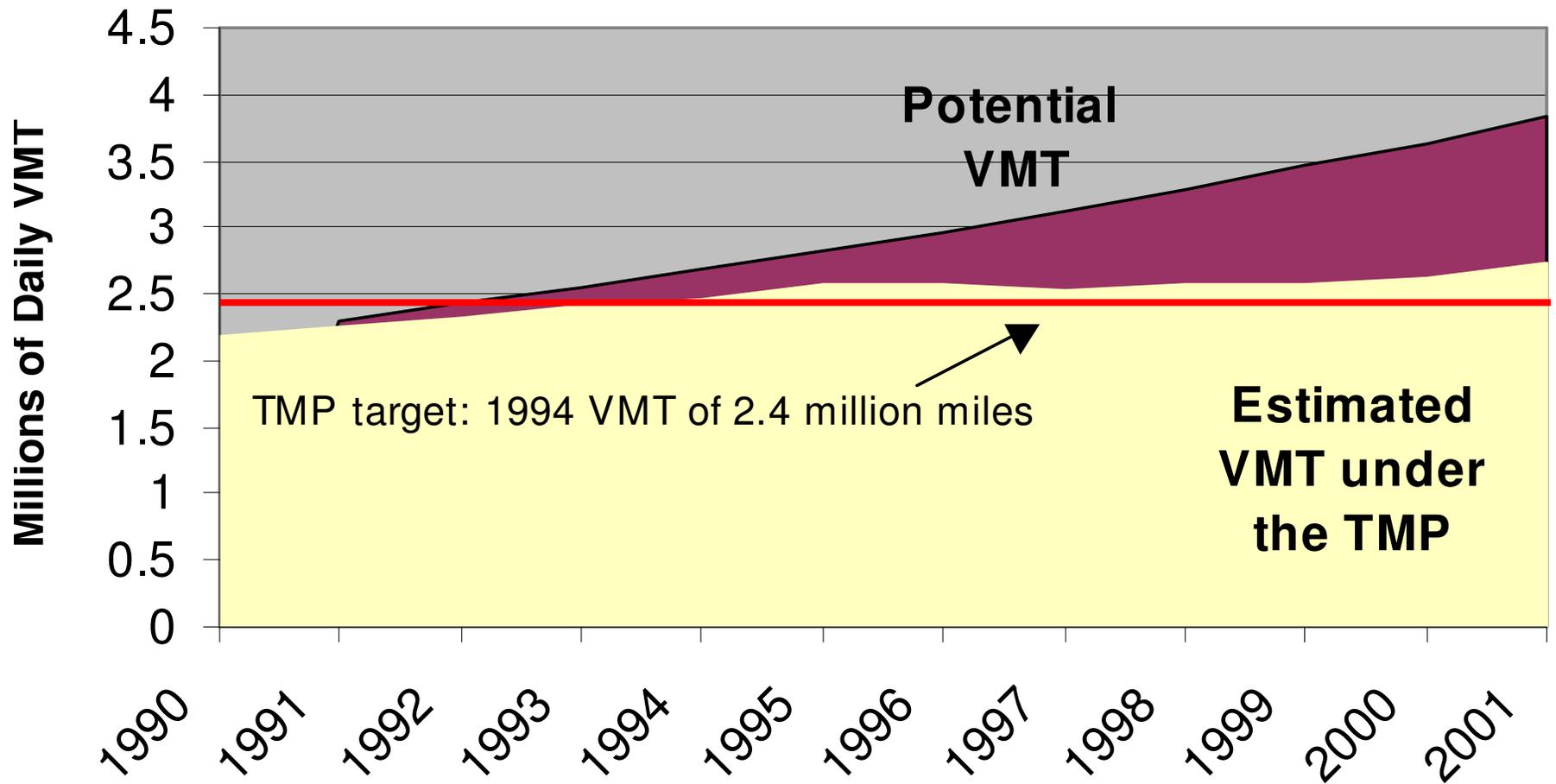
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Transportation Master Plan



- Guiding policy for all of transportation through 2025
- Establishes funding priorities
- Developed through community process
- Creates specific transportation goals:
 - Hold VMT at 1994 levels
 - Reduce SOV travel to 25% of all trips
 - Continue reduction in mobile-source emissions
 - No more than 20% roadways congested
 - Create a multi-modal transportation network

Results – Transportation Master Plan



Source: City of Boulder

Potential Next Steps

- Inventory of VMT
- Set target for VMT reduction
- Formulation of a VMT reduction plan
- Implement the plan
- Monitor progress of the plan

Questions/Discussion



Ben Rasmussen
Senior Program Officer
ben.rasmussen@iclei.org

617-850-9042

www.iclei-usa.org

