

# Railvolution



## Clark Manus, FAIA

87th President

The American Institute of Architects

CEO of Heller Manus Architects

October 18, 2011

# CEO of Heller Manus Architects



Academic



Hotel/Retail



Renovation



Civic



HM International



Residential



Transportation



Master Planning

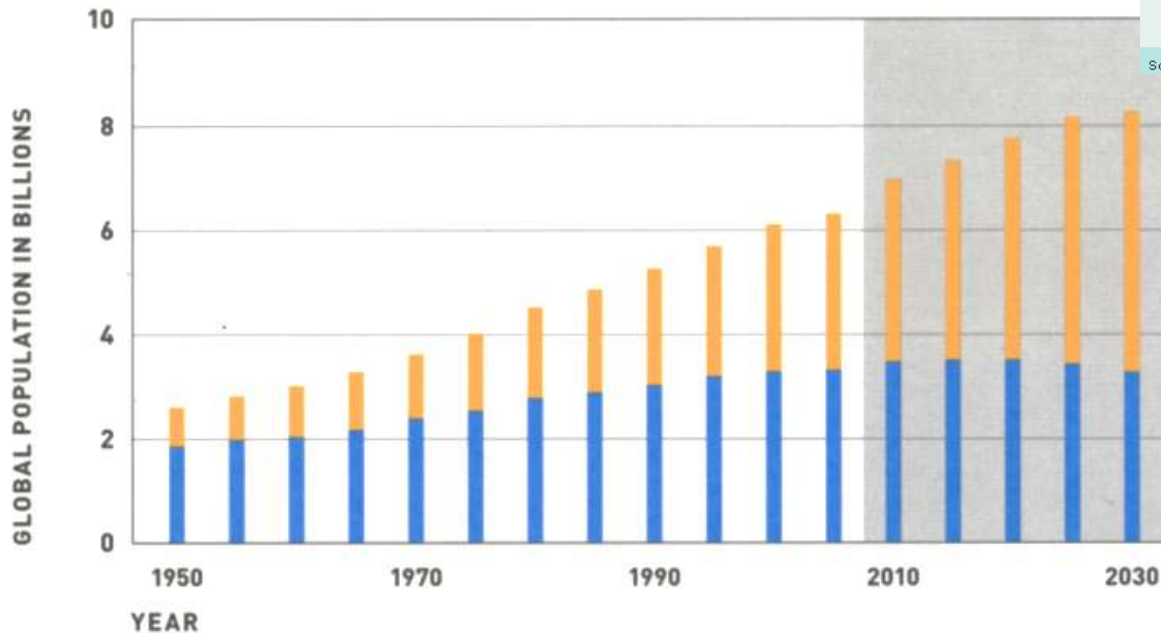


Commercial

“World Population is projected to rise to 9 billion by 2050, with 7 of every 10 people living in urban areas.”

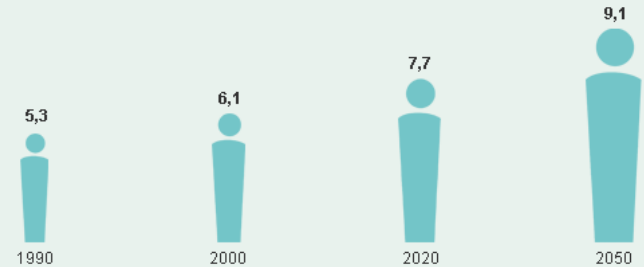
## The Future Is Urban

■ In Rural Areas ■ In Urban Areas



Source: United Nations

### Growing world population



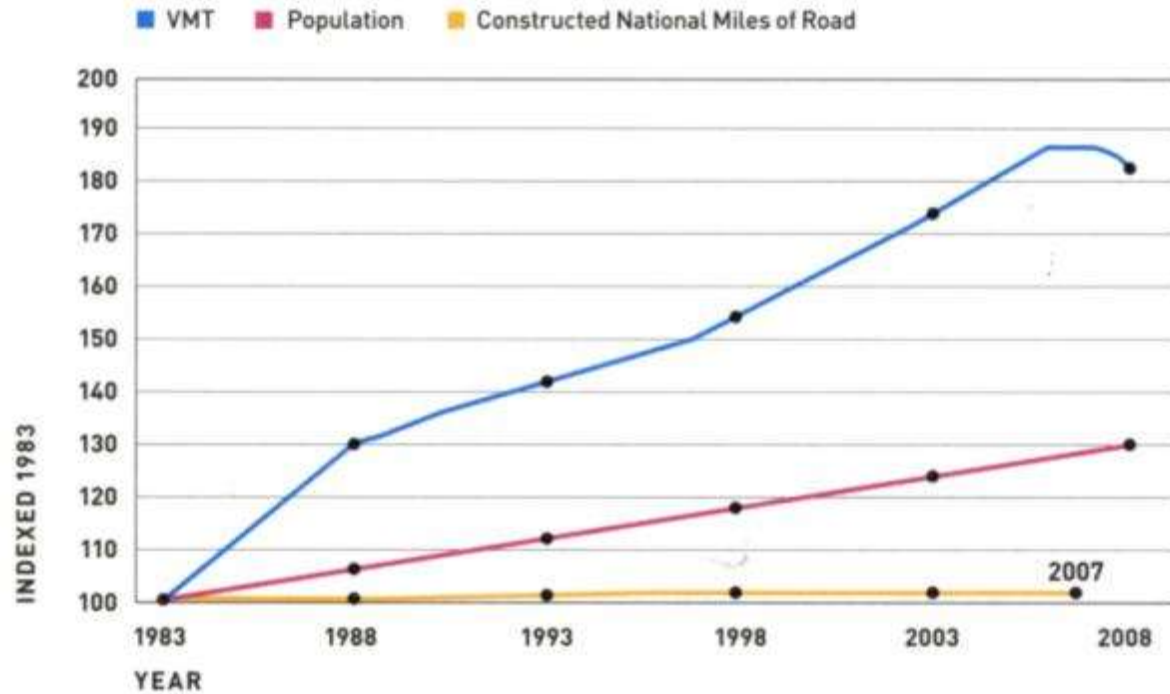
Source: UN, World Population Prospects: The 2008 Revision, März 2009

Source: *The City in 2050: Creating Blueprints for Change* by ULI (2008)



Credit: Szymon Kochanski (Beijing 2008)

## Traffic Congestion in the U.S.: Use Has Far Outpaced Road Construction



**This chart would look different with more compact development.**

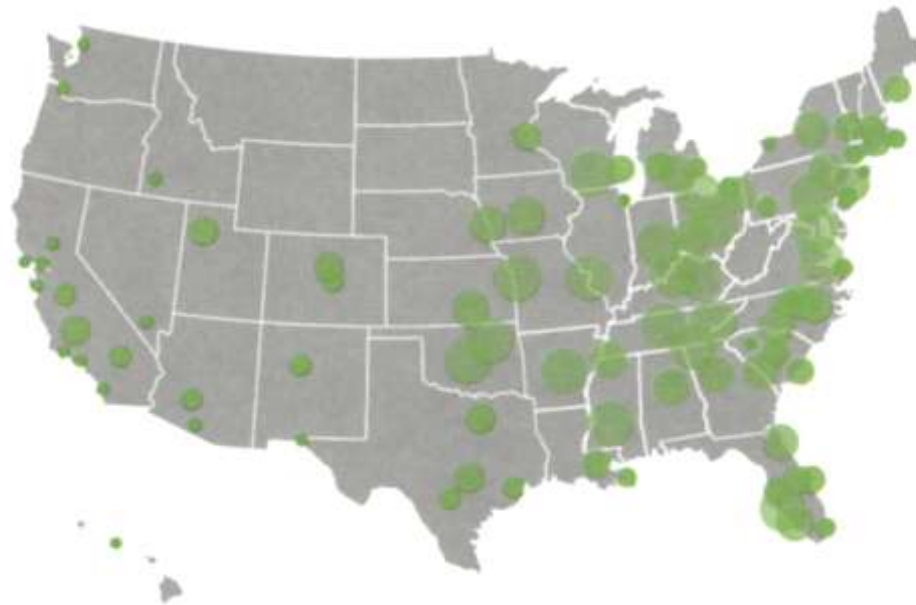
Source: Federal Highway Administration-Highway Statistics Reports, U.S. Census Bureau-Population Data

Note: VMT = Vehicle Miles of Travel

Image: *The City in 2050: Creating Blueprints for Change* by ULI (2008)

## Per Capita Carbon Footprints in the U.S.: Emissions per Capita in the 100 Largest Metro Areas

Least  Most

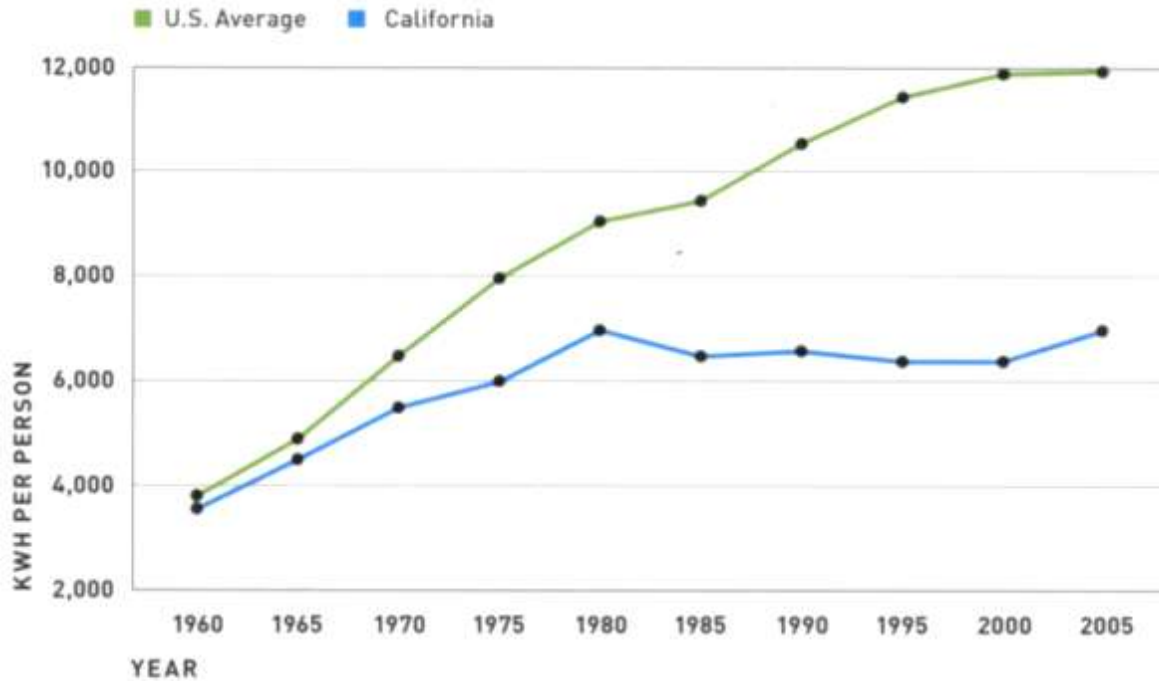


Emissions from the transportation and residential sectors vary by metro area, largely due to how each generates energy.

Source: The Brookings Institution, 2005

Image: *The City in 2050: Creating Blueprints for Change* by ULI (2008)

## Less Is More: California's Annual Electricity Use, 1960-2008



California's per capita electricity use has remained flat since the mid-1970's as a result of aggressive legislation.

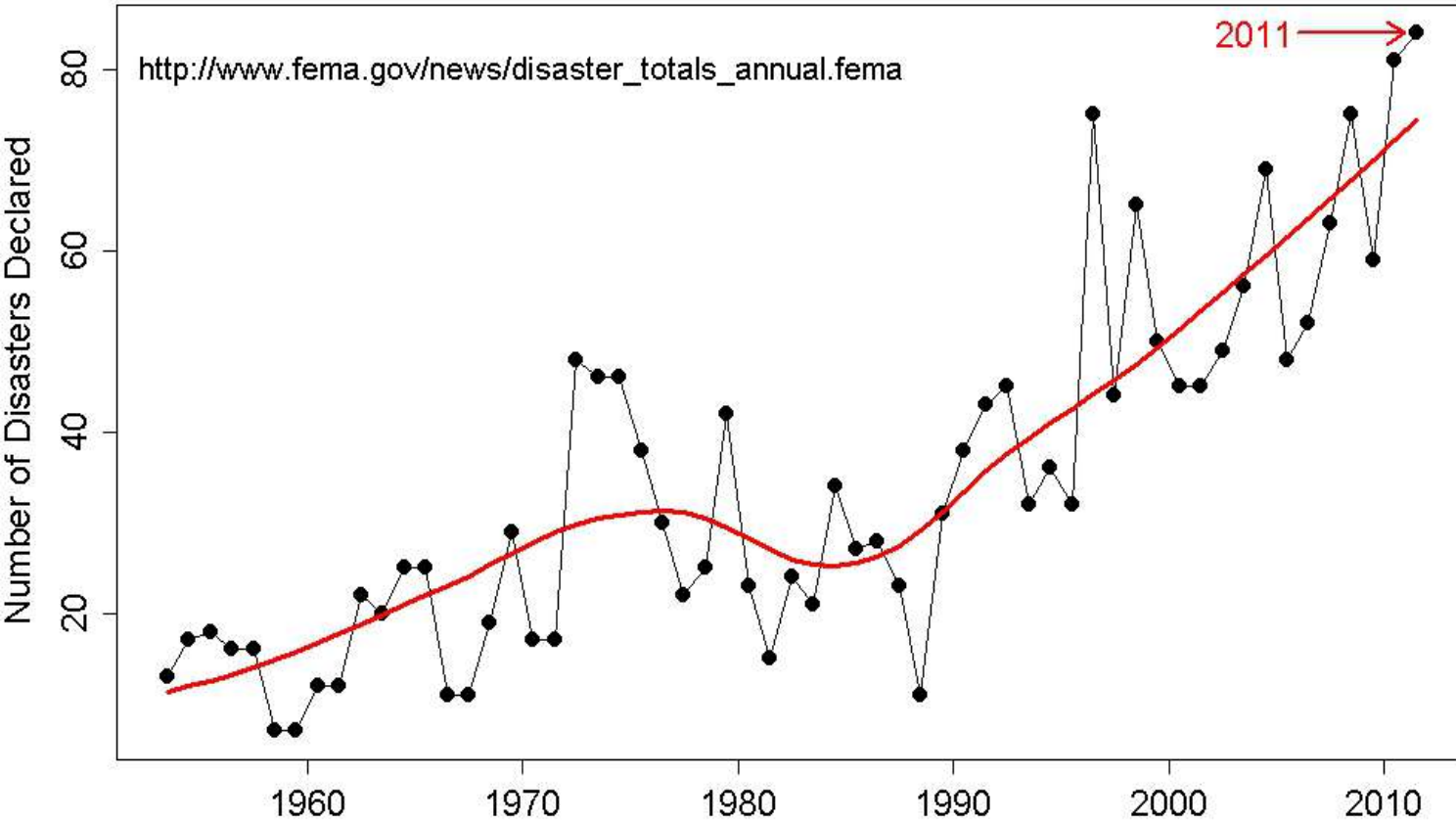
Source: *New York Times*

Image: *The City in 2050: Creating Blueprints for Change* by ULI (2008)

# 2005 Hurricane Katrina



# FEMA



### FEMA ON WARNING WATCH

U.S. NATURAL DISASTERS BLOW THROUGH RELIEF FUNDS

With the possibility of another major disaster, FEMA is looking for ways to speed up the flow of relief funds to disaster victims.

**TORNADOES**  
**\$23.5** billion in damage  
 593 tornadoes touched down  
 160 people killed  
 875 injured

**HURRICANE**  
**1,100 MILES** of coastline hit  
**4 MILLION** people affected  
**\$10 BILLION** in damage

**SNOWSTORMS**  
**\$2 & 36** billion in damage  
**29.5"** snowfall  
**40"** snowfall

**WILDFIRES**  
**6.9 MILLION** acres burned  
**\$1 MILLION** per day in damage  
**2,500** firefighters

**EARTHQUAKES**  
**13,000** earthquakes  
**4-4.9** magnitude earthquakes

**RISE IN NATURAL DISASTERS**

ANNUAL COSTS AND OCCURRENCES

Year	Disasters	Cost (\$ Billion)
2007	63	\$11.0
2008	75	\$17.0
2009	68	\$11.0
2010	80	\$16.0
2011	85	\$17.0

Help. Rebuild. Donate. FEMA logo, United Way, American Red Cross, Habitat for Humanity, and Google logos are present.

# The San Francisco Embarcadero Freeway

October 1989 The Loma Prieta Earthquake...The Tipping Point



# The Rebirth of the Embarcadero

*"Build it and they will come"*

