

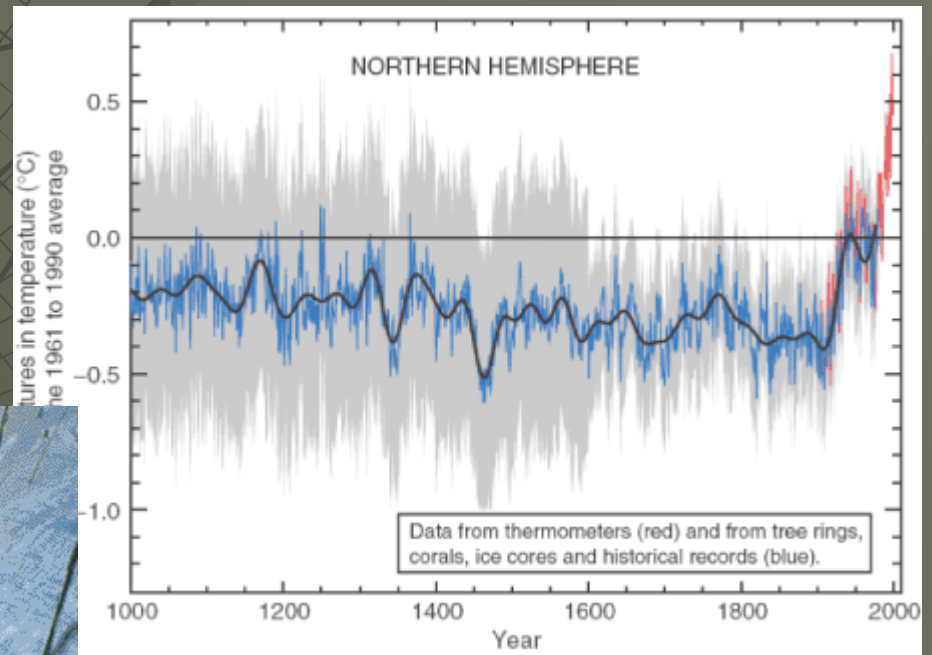
Acting Locally on Global Warming



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Global Warming - It's Here

- Hurricanes
- Drought
- Arctic Ice Cap
- Siberian Tundra
- Species Extinction
- Ocean Temperatures



Global Warming is Us

- McMansions
- SUVs 10+ trips/day
- Planet Pluto and back/day
- Far Flung Food Sources
- Fossil Fuels for Breakfast



It's Time to Act



Step One: Join the Cool Cities Campaign

- ◆ Sign the U.S. Mayors' Climate Protection Agreement, based on the Kyoto Protocol
- ◆ Pledge to achieve 7% emission levels below 1990 levels by 2012



◆ <http://usmayors.org/climateprotection/>

Step Two: Do the Numbers

- ◆ Calculate greenhouse gas emissions for a base year (e.g., 2000) and for a forecast year (e.g., 2015)
- ◆ Capture emissions levels from all municipal operations and from all community-related activities
- ◆ A benchmark for planning and monitoring progress



Step Three: Develop an Action Plan

- ◆ Timeline
- ◆ Financing mechanisms
- ◆ Assign responsibility to departments and staff
- ◆ Public awareness and education efforts



Step Four: Implement, Monitor



- Implement the policies and measures contained in the local action plan
- Monitor and verify progress

Cool Cities in New Mexico

- ◆ Alamogordo
- ◆ Albuquerque
- ◆ Capitan
- ◆ Las Cruces
- ◆ Ruidoso
- ◆ Taos
- ◆ Santa Fe*
 - 500 more in the U.S.
 - *Also adopted 2030 Architecture Challenge



Policy Options



Switch to the Most Efficient Use of Electricity



- ◆ Put outdoor lighting on an electricity diet
- ◆ Switch traffic lights to LED lamps
- ◆ Adopt low light standards

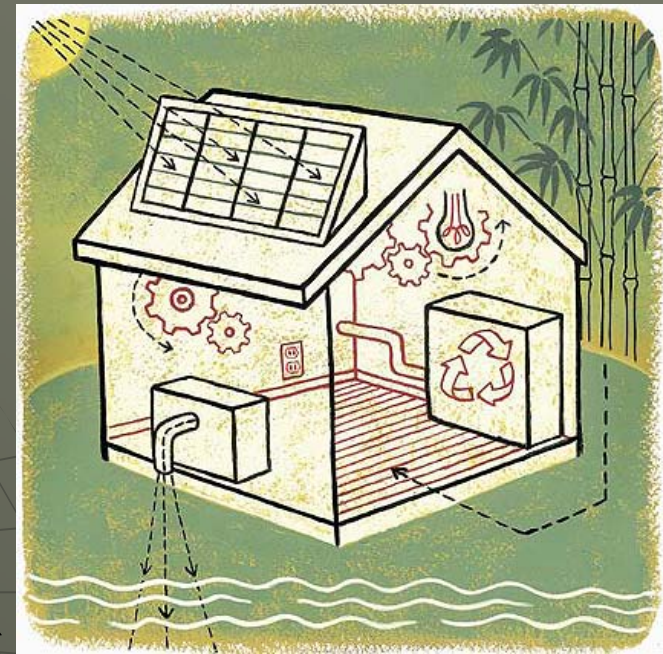
Do the Intersection Match

- ◆ Typical intersection costs \$7,000 per year to power
- ◆ Roundabouts \$0
- ◆ Costs per LED bulb
 - Green \$144
 - Amber \$ 81
 - Red \$ 74
 - Green Arrow \$121
 - Pedestrian Sign \$360



Build Energy Efficient High Performance Buildings

- ◆ Added costs, up to 2%, pay off in 4-5 years in reduced energy utility costs
- ◆ Focus on life cycle costs. Construction = 20-30% of a building's total costs over 40 years

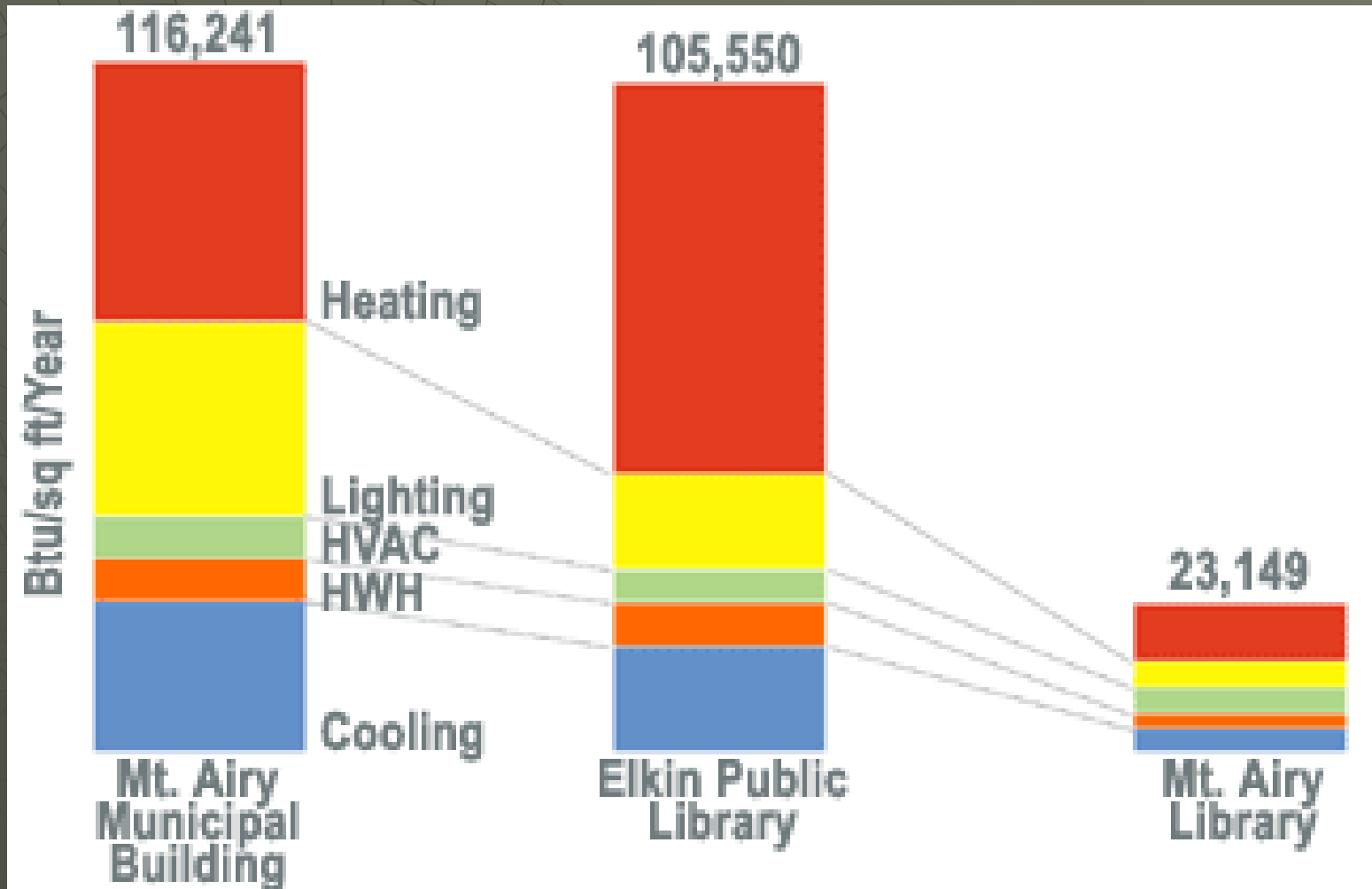


Set New Building Standards

- ◆ Orient buildings mindful of prevailing winds
- ◆ Use overhangs and light color roofs
- ◆ Plant deciduous trees on south and southwest sides, conifers on north and northeast sides
- ◆ Use daylighting to bring light into the interior



City of Mt. Airy, NC High Performance Building Energy Usage Reduction Comparison



As the Construction Industry Gains Familiarity with Green Building, Added Costs Go to Zero

The New Math:

5 = \$0

We can show you five green buildings that had no cost increase at all.



www.usgbc.org

The graphic features a large green arrow pointing right, with the text 'The New Math: 5 = \$0' overlaid. The '5' is on a yellow background, the '=' is on a white background, and the '\$0' is on a white background. The USGBC logo is a circular seal with a tree in the center and the text 'USGBC' around it.



Clackamas High School, OR
LEED Silver (\$117/ft² vs. \$140
for traditional construction)
\$69,000/yr. – energy utility bill
savings

Adopt Leadership in Energy & Environmental Design (LEED) Certification

- ◆ The recognized standard for authenticating green buildings
- ◆ Point System for LEED Basic, Silver, Gold, and Platinum
- ◆ Standards exist for new buildings, renovations, residential, public schools, and neighborhoods
- ◆ Value of green buildings' \$ benefits is over 10X the added cost



Hit the (Solar) Roof

- ◆ Design new construction for solar or solar ready
- ◆ Place solar on rooftops of all energy efficient public buildings
- ◆ Devote 25% of rooftops to solar, for hot water, heat, “adsorption” space cooling, and electricity



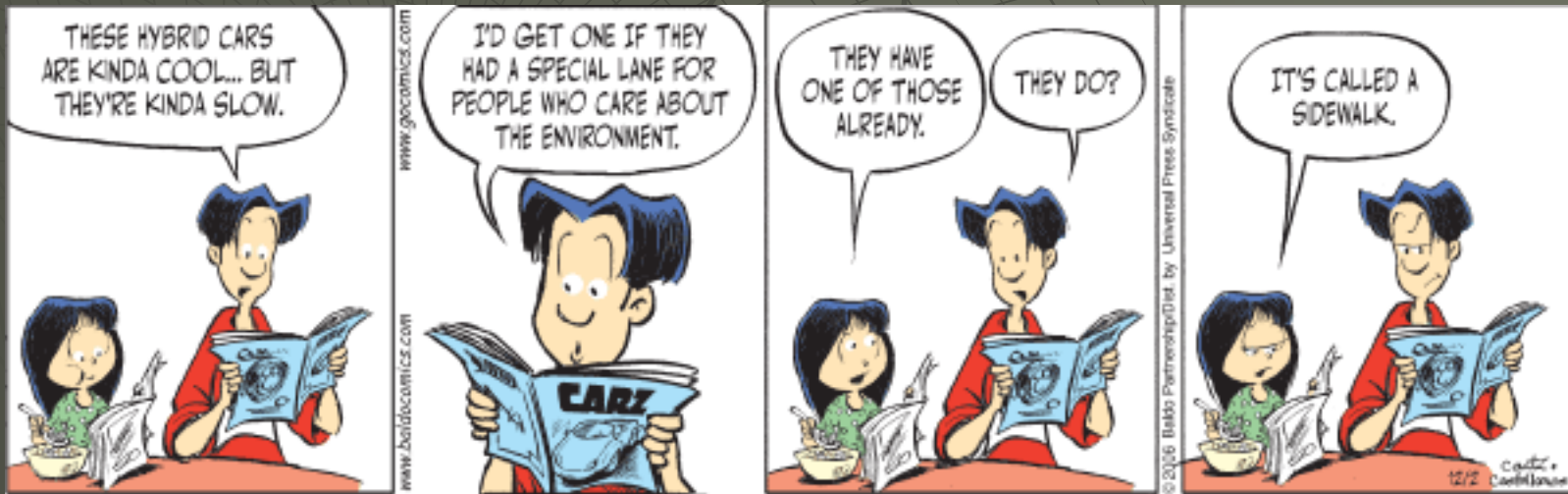
Adopt Mobility Goals

- ◆ Provide for Five Forms of Mobility: Foot, Bike, Transit, Shared Car, Auto
- ◆ Ensure Access to a Trail and Transit Within a Half Mile of Home, School, Job or Shop



Public Works for Public Walks

- ◆ Set aside one percent of CIP for sidewalk improvements
- ◆ Bury utilities
- ◆ Enliven and make safe all walks



Make Bicycling Happen

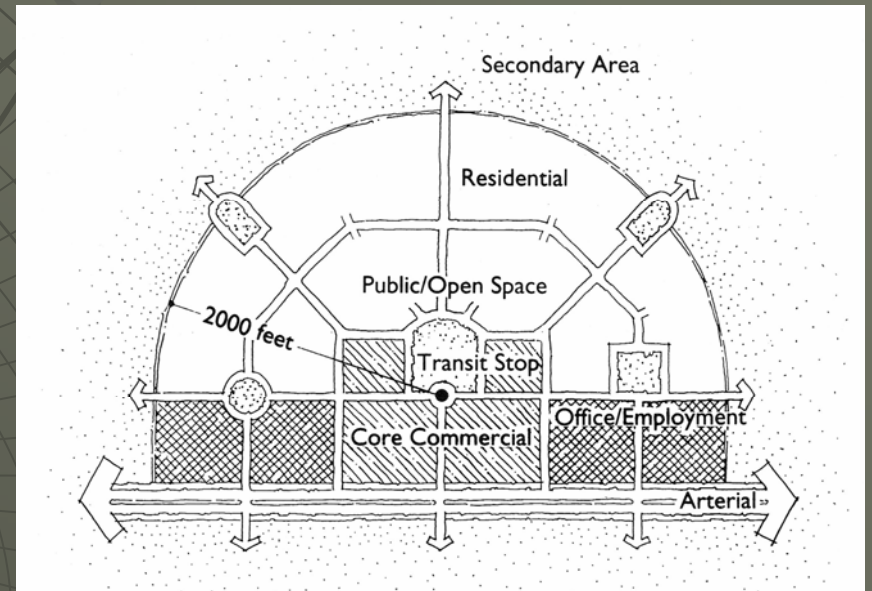
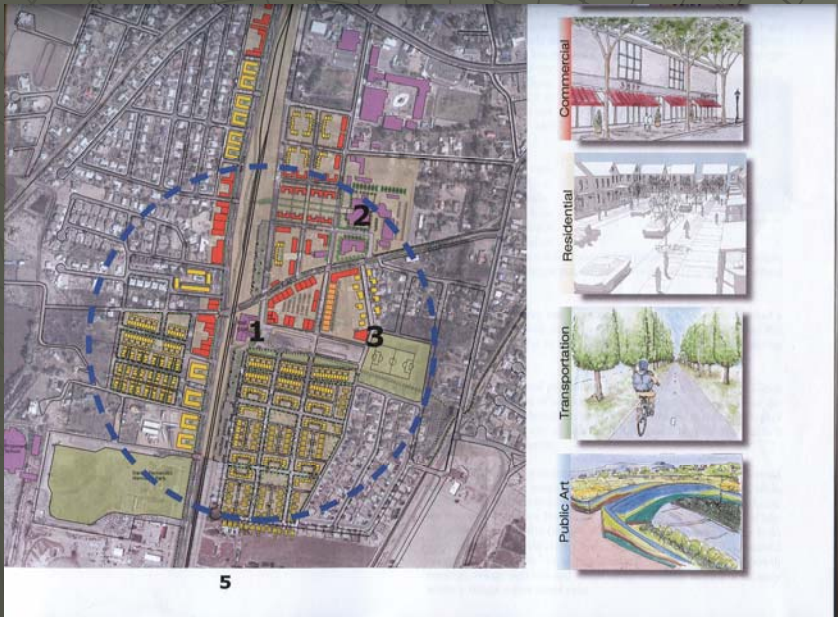
- ◆ Put in a bike trail system
- ◆ Ensure bike racks where needed
- ◆ Start a rent a bike program
- ◆ Offer bikes at the workplace



Enact a Town Center Ordinance



Pass Transit Oriented Development Zoning

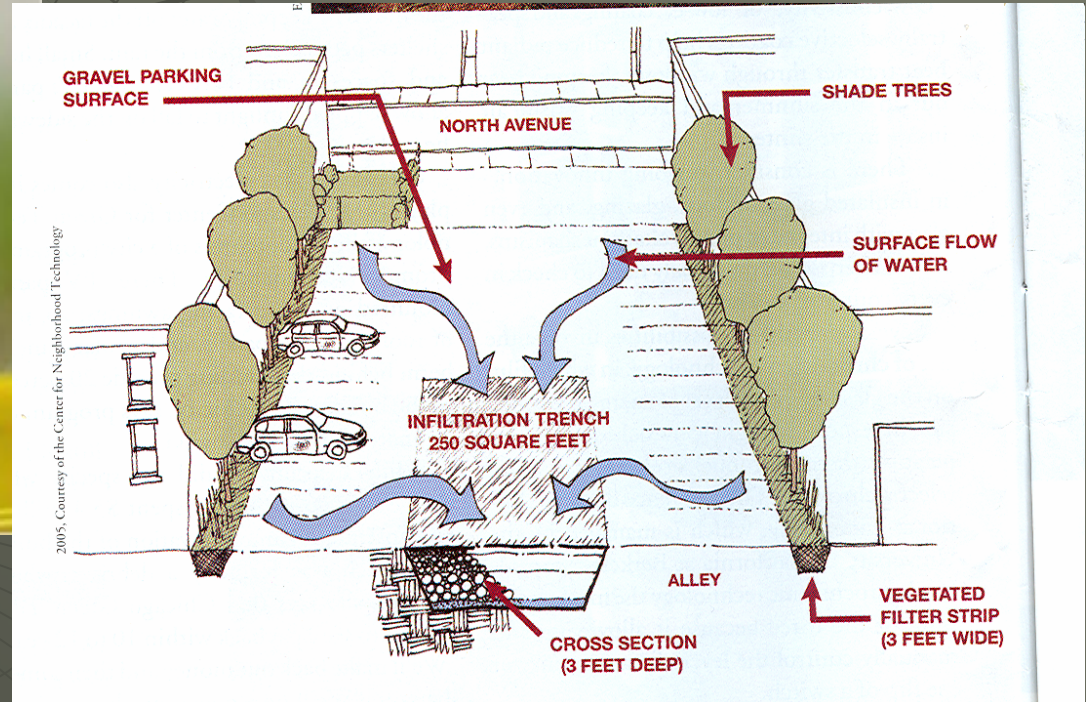
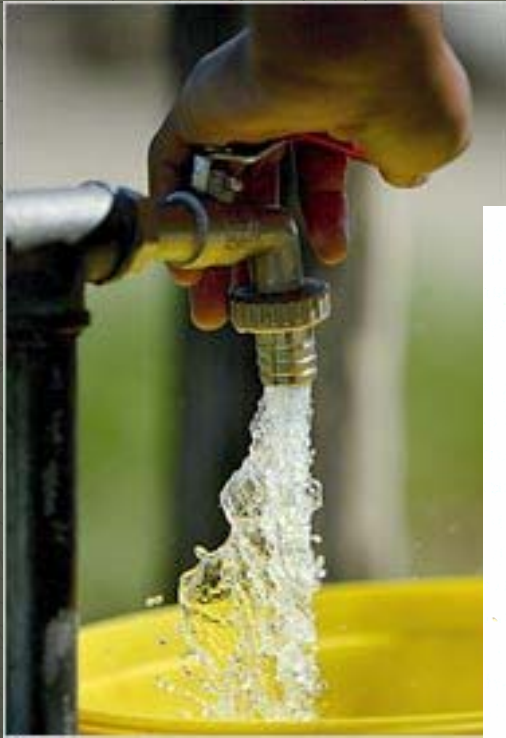


Build Complete Neighborhoods

- ◆ Line parking lots, institutions, and big box buildings with retail and housing
- ◆ Add a coffee stand at the library
- ◆ Connect the 'hood with trails, transit



Enact a Water Conservation Ordinance



Green Up



Cool Cash – Funding Options



Energy Performance Contracting

- ◆ RFQ process to competitively select an Energy Services Company (ESCO)
- ◆ ESCO performs energy audits of municipal buildings
- ◆ Upon EMNRD approval, agreement established
- ◆ Example: Albuquerque funded 5 solar swimming pool systems
- ◆ Upshot: upgrade facilities and improve energy efficiency, without the upfront cost

State and Local Capital Outlay

- ◆ Water
- ◆ Transportation
- ◆ Buildings
- ◆ Economic Development



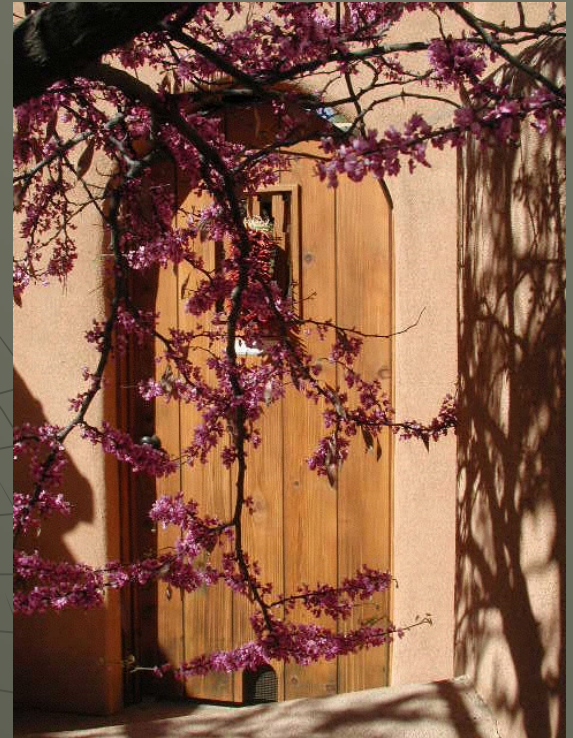
General Obligation Bonds

- ◆ Sidewalks
- ◆ Roundabouts
- ◆ Water harvesting
- ◆ Renewable and energy efficiency projects



Tax Increment Financing

- ◆ Buses, trolleys, train cars, tracks
- ◆ Transit oriented development infrastructure
- ◆ Pocket parks
- ◆ Bicycle trails and fleets



Real Estate Transfer Tax

- ◆ Location efficient mortgage underwriting of housing units within one-half mile of a transit stop
- ◆ Civic infrastructure
- ◆ Renewable and energy efficiency fund



Public Benefits Charge

- ◆ Energy Efficiency Improvements for Homes, Apartments and Businesses
- ◆ Public Facilities Improvements
- ◆ Solar Collectors for Hot Water, Heating, and Electricity



Transportation Utility District

- ◆ Assess fees to property owners based on estimated demands on streets
 - Sidewalk improvements
 - Roundabouts
 - Road repairs and maintenance
 - Connector trails and streets



The Future Is Now

