



Southern
Environmental
Law Center

Health Cost Impacts and Economic
Development and Economic Security:

The True Cost of Transportation

Brian Gist

Southern Environmental Law Center

Just the Facts

- **Transportation**

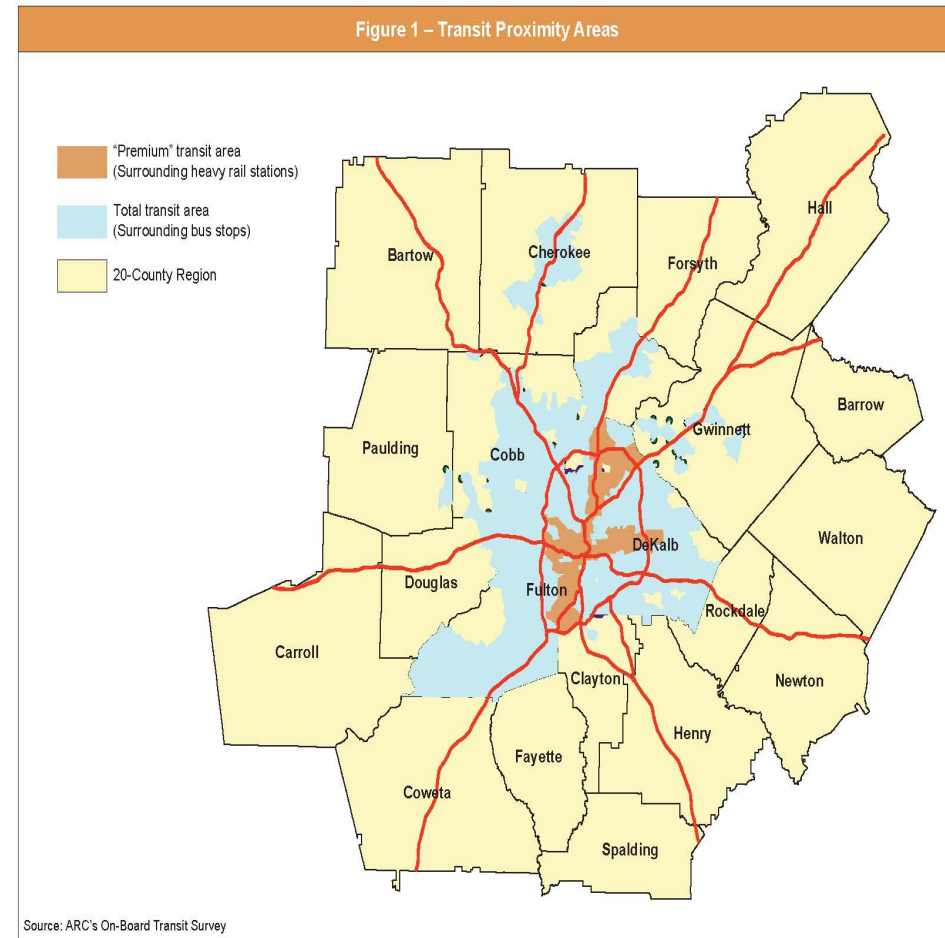
- Atlanta commuters average 17.5 miles to work
- The average one-way travel time is 30 minutes
- 82% of workers drive alone to work

- **Air Quality**

- 1/2 of Atlanta's ozone pollution comes from mobile sources

Transportation In Atlanta

- Long distance trips
- Few transportation options
- Automobile dependency
- Community designs that don't accommodate walking and biking



Total transit area and premium transit areas.
Atlanta Regional Commission, "Regional Snapshot" (May 2012)

Transportation Costs

- **Air Pollution:** decreased life expectancy, decreased productivity, medical costs, pain and suffering.
- **Lost Time:** long trips, unreliable trip times
- **Physical Activity:** Increased obesity, heart disease, lower life expectancy
- **Maintenance, Operation, and Accidents:** Vehicle ownership, fuel, repair costs, personal and property damage costs.

Cost of Exposure to Air Pollution

Air Pollution Costs by Vehicle Class		
Vehicle Class	Total Estimated Health Cost (in millions, 1990 dollars)	Cost Per Mile of Travel (cents)
Automobiles	\$20,343	1.1
Pickups, Vans	\$11,324	2.6
Gas Vehicles > 8,500 lbs	\$1,699	3.0
Diesel Vehicles > 8,500 lbs	\$6,794	3.9
Overall	\$40,443	1.5

Federal Highway Administration, *“Addendum to the 1997 Federal Highway Cost Allocation Study Final Report”* (May 2000)

Cost of Lost Time

- The Texas Transportation Institute's "Urban Mobility Report" estimates that congestion costs the average Atlantan \$924 per year
 - Each hour in traffic is worth \$16.30 (Consumer Price Index)
 - 43 excess hours in traffic per year
- Excess Hours Do Not Account for:
 - Length of trip
 - Variability in automobile trip times
- Transit, bike and pedestrian trips are less variable.

Cost of Reduced Physical Activity

- 30 Minute Commute in a Car Translates into a 3% Greater Chance of Obesity.

American Journal of Preventive Medicine, "Obesity Relationships with Community Design, Physical Activity, and Time Spent in Cars."

- Using Light Rail to Commute Reduces Odds of Obesity by 81%

MacDonald et al. "The effect of light rail transit on body mass index and physical activity." Am J Prev Med 2010;39(2)105---112

- Charlotte's Light Rail Line Estimated to Save \$12.6 Million Over 9 Years in Public Health Costs

Stokes et al. "Estimating the effects of light rail transit on health care costs." Health & Place 14 (2008) 45---48

Cost of Ownership and Accidents

- An average sedan costs 60 cents per mile to own, operate, and maintain.
 - 2012 AAA “Your Driving Costs” report
 - 35 mile roundtrip commute costs \$21.60 per day and \$5,400 per year.
- Crashes cost Atlantans over \$10 billion in 2009

Metro Area	Number of Fatalities	Number of Injuries	Cost of Fatalities (Millions)	Cost of Injuries (Millions)	Total Cost of Crashes (Millions)
Atlanta	498	62,263	\$2,988	\$7,845	\$10,833

AAA “Crashes vs. Congestion: What’s the Cost to Society” (November 2011)

Technology Solutions

- **Clean Fuels**

- Electric, natural gas, other alternative fuels vehicles

- **Improving Vehicle Technology**

- Increased fuel economy, pollution controls, safety

Transportation Planning Solutions

- **Operational Improvements to Transportation System**
 - Add capacity, remove bottlenecks, improve interchange design
- **Reduce Trip Distance**
 - Better planning and zoning, urban growth boundaries, smart growth strategies
- **Alternative Transportation**
 - Transit capacity, bike and pedestrian infrastructure, transit-oriented growth

Solutions Matrix

	Air Pollution	Lost Time	Physical Activity	Maintenance, Operation, and Safety
Clean Fuels	X			
Technology Improvements	X			X
Operational Improvements	X	X		X
VMT Reduction	X	X		X
Alternative Transportation	X	X	X	X



Southern Environmental Law Center

Brian Gist

127 Peachtree St., Suite 605

Atlanta, GA 30303

bgist@selcga.org

(404) 521-9900