

Why urban infill is good for the environment

Will Toor

Southwest Energy Efficiency project

How to get less traffic



Transit



Smart land use



Walk and bike infrastructure

Land Use and Driving- The Role Compact Development Can Play in Reducing Greenhouse Gas Emissions

At a Glance: VMT and GHG Reduction Estimates from Compact Development (vs. Typical Suburban Development)

Study	VMT Reductions	GHG Reductions
<i>Moving Cooler</i>	20–60 percent	20–60 percent
<i>Growing Cooler</i>	20–40 percent	18–36 percent
<i>Driving and the Built Environment</i>	5–12 to 25 percent	5–12 to 25 percent

Location Efficiency and Housing Type

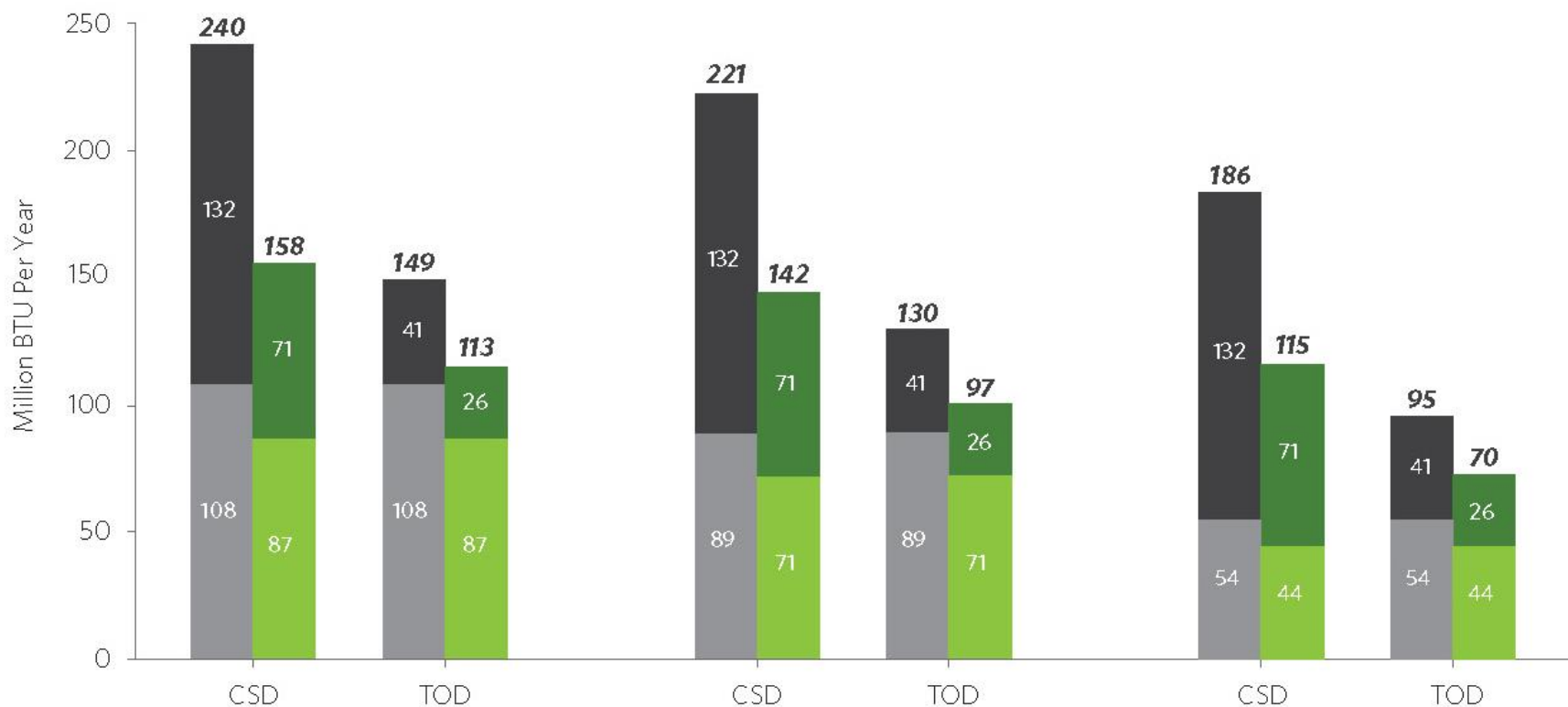
Boiling it Down to BTUs

Transportation Energy Use
 W/ Green Automobiles
 Home Energy Use
 W/ Green Buildings

Single Family Detached

Single Family Attached

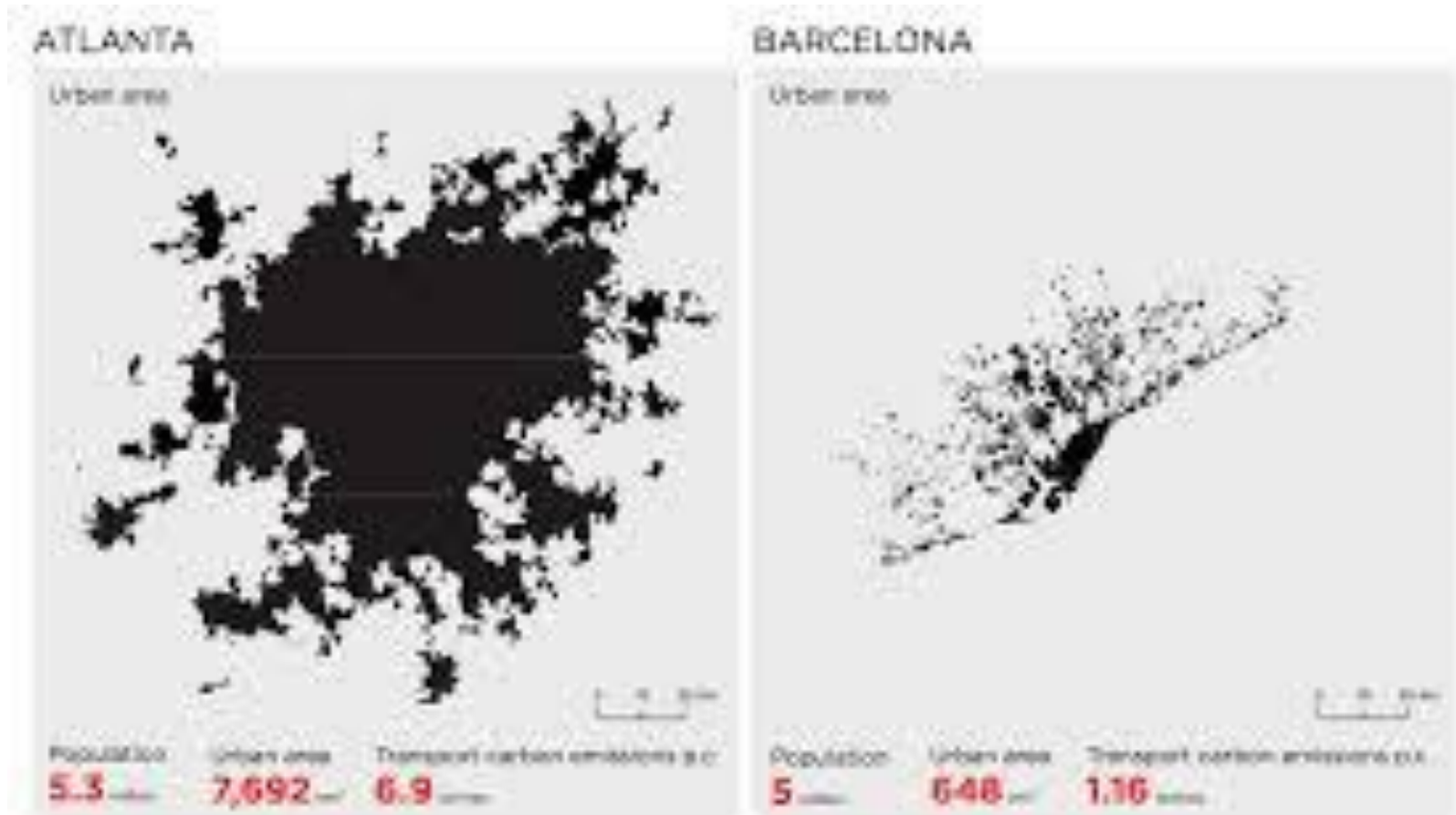
Multi-Family



CSD - Conventional Suburban Development

TOD - Transit Oriented Development

Atlanta vs Barcelona



Source: LSE Cities 2014

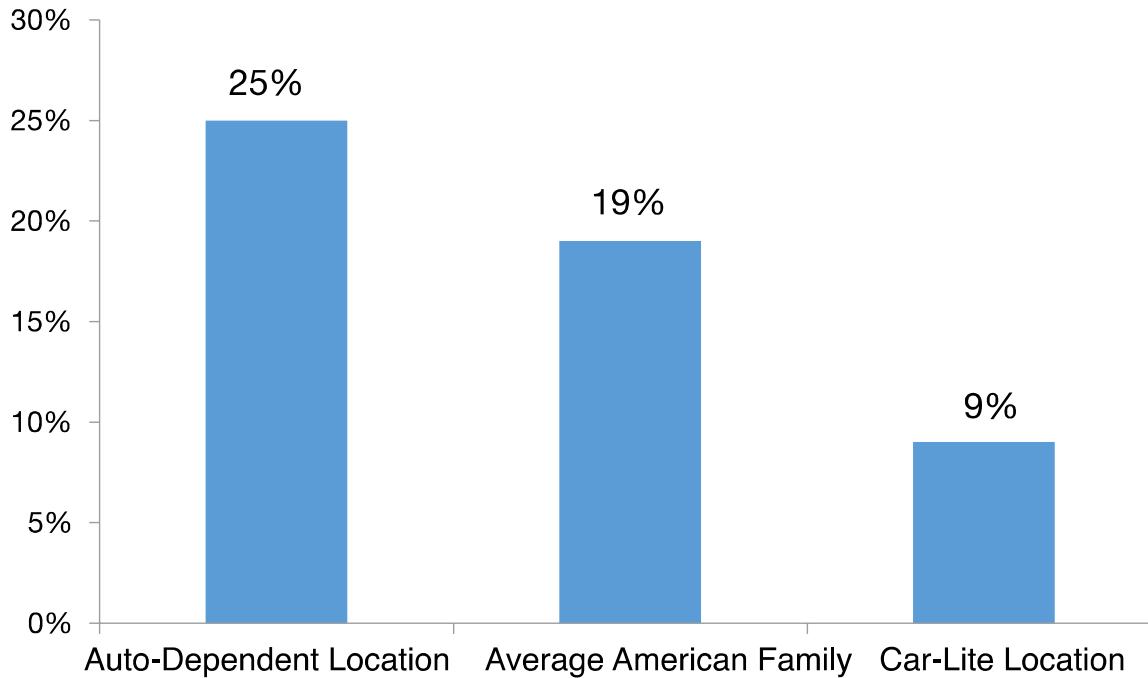
More compact development can reduce transport emissions by an order of magnitude.

Boulder example – more housing = less driving!

2005 Regional Per Capita VMT	26.3
Boulder In-commuter	32.4
Boulder Resident	11.2

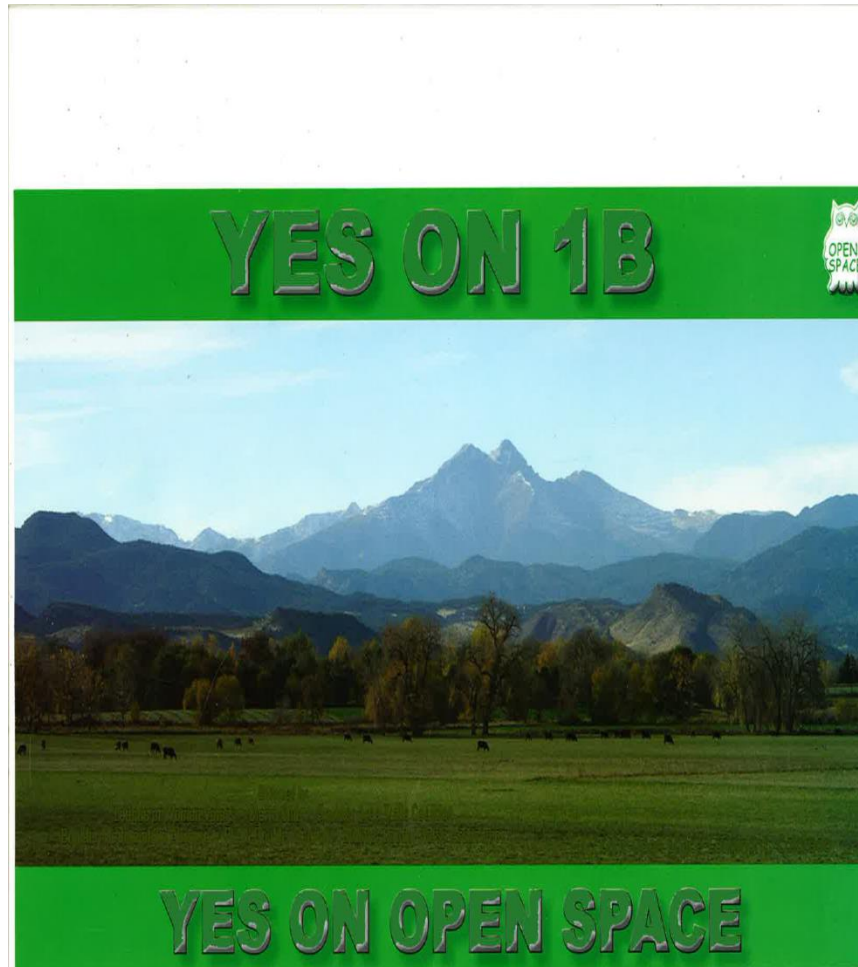
More housing in town = lower transportation costs

FIGURE 3. PERCENT OF INCOME SPENT ON
TRANSPORTATION BASED ON TYPE OF PLACE YOU LIVE



Source: Federal Highway Administration Livability Initiative⁶

This



Requires this



