The Brookings Institution

Metropolitan Policy Program

The Structural Shift in Building The Built Environment

Building a transportation system to supports a 21st century economy
Size of Built Environment Vs US Assets

35% of US Assets in Built Environment*

But: Slower to Change Course Than the Proverbial Super Tanker
Since at Most 2% Added to Inventory Each Year

Plus: 3rd Fastest Growing Country in Absolute Population
Will add next 100 million by 2040s

*Source: Roulac Global Places, LLC
Role of Built Environment in Green House Gas Emissions

When we address CO2 and other GHG emissions, the built environment will play a major role, if not the leading role.

Built Env. = 73% of GHG Emissions in USA

When we address CO2 and other GHG emissions, the built environment will play a major role, if not the leading role.
Transportation Drives Development

For 5500 years of city-building...that meant primarily walking.
New Method of Building the Built Environment: Drivable Sun-urban

Pendulum Swings in How America Invests

Major Structural Shift in 1940s
Interchanges as the new “downtowns”
Regional malls as the “heart” of these new places
We have only gotten better at building freeways
Our commercial strips have continued unabated
De facto Domestic Policy Starting in 1950s→
Largest Social Engineering Project

- Drivable sub-urban generally only legal form
- Massive subsidies for infrastructure—trillions for drivable sub-urban while billions for cities
- Finance industry more comfortable with drivable sub-urban
- Real estate industry skill set

• Where has this policy lead us?
How it Laid Out on the Ground: 1960-present

1960-1989

1990-present
Just as we in real estate got really good at building drivable sub-urban development...the market changes on us.
Reasons for Market Demand for Walkable Urban Places

- Driven by Gen Xers/Millenials—television shows
- Baby Boomers have become empty nesters and soon retirees, starting in 2012 in big numbers
- 50% of Households in 1950s w/children/50% w/no children; 33% w/children today/67% without; ONLY 12% of new households over next 20 years will have children/ 88% without → target WU market
- Boredom with drivable sub-urbanism; “More is Less”
- Cost of energy—gasoline and home heating/cooling
- Pent up demand
Demand Preference
Source: Dr. Jonathan Levine, University of Michigan

Yet SUPPLY is far less = Pent-Up Demand
### A Major **Structural** Change

Dr. Arthur C. Nelson in *Journal of the American Planning Ass’n*

<table>
<thead>
<tr>
<th>2003</th>
<th>2025</th>
<th>40-200% Price Premium($/sf): EX.</th>
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<td>Large Lot SFD</td>
<td>Range of Demand</td>
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<td>57,000,000 DU</td>
<td><em>Loss of 22MM DU</em></td>
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<td>Small Lot/Attached</td>
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<tr>
<td>49,000,000 DU</td>
<td><em>Gain of 56MM</em></td>
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Driven Sub-urban Walk Scores and $/square foot
Upper-Middle Income Suburb of DC (Great Falls, VA)

Square footage-7,100
Lot size-90,000 sq ft
Total Price--$1.7 MM
Walk Score-9 (walkscore.com)
Price-$238/ft

Close to being worth less than replacement cost w/ no land

Square footage-9,000
Lot size-79,000
Total Price--$2 MM
Walk Score-9
Price-$222/ft
Walkable Urban Walk Scores and $/square foot
Upper-Middle Income Section of DC (Kalorama)

Square Footage-3,200
Lot size-1,600 sq ft
Total Price--$1.9 MM
Walk Score 86/ Price-$603/ft
1/50th the lot size
2.6 X the price/ft

These Places were just about slums 20 years ago

Square Footage-7,200
Lot size-3,500
Total Price--$5.1 MM
Walk Score 88/ Price-$703/ft
1/25th the lot size
3.0 X the price/ft
How to Afford Higher Price of Walkable Urban Development?

1. Average Household

2. Drivable Sub-urban Household

3. Walkable Urban Household (RE can take advantage Of extra 16%)

Larry Frank Research: 4-5:1 Re: Energy Usage and CO2 Emissions
How to Afford Higher Price of Walkable Urban Development?

It’s a supply side issue:
More supply will drive down the price of land
Implications on Energy Security & Climate Change

Walkable urban households use 20-30% of the energy & emit 20-30% less CO2 than drivable sub-urban households
Walkable Urban Places are Different & Complex to Manage

- Teaching a NASCAR Driver to be a Fighter Pilot
- Must Have a Strategy & Be Managed to Succeed, e.g., BID
- Each New Element Adds Value to Existing Assets…IF within Walking Distance (1500-3000 feet)
- Requires transportation choices
- Creates a Special Place…and Significantly Greater Asset Values and Taxes
- *More is Better*—Upward Spiral
5 Types of Regional-serving Walkable Urban Places of Commerce (examples developed since 1990)

- **Traditional Downtowns** (San Diego, Denver, Downtown NYC, Seattle, Chattanooga, DC, etc.)
- **Downtown Adjacent** (Dupont Circle, West End (DC), Atlantic Station, Midtown Atlanta, etc.)
- **Suburban Town Center** (Pasadena, Santa Monica, Beverly Hills, Palo Alto, Mountain View, Redmond, White Plains, Stamford, etc.)
- **Suburban Redevelopment** (Ballston, Friendship Heights, Belmar, Santana Row, etc.)
- **Suburban Green Field** (Valencia Town Center, Reston Town Center, new generation of lifestyle centers, etc.)
Footloose & Fancy Free
Brookings Field Survey, December, 2007

• 157 Regional-serving walkable urban places in top 30 metro areas
• Washington has highest per capita number (20 VS 2), followed by Boston, San Francisco, Denver & Portland
• NY is #10: Manhattan (8.5%) VS four state metro
• 65% of WU places have rail transit…DC 90% do
• Metro areas with new rail systems MORE likely to be rated in top 15…speed of this trend taking hold
• 50/50 split between center city and suburban locations
• 100’s more walkable urban places probable
• Tale of Two Kinds of Metro Areas
Washington as the Model
For the Early 21st Century
20 in 2007 vs. 2 in 1987
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10 More on the Way
Chicago
Even Downtown Detroit!!!
New Privately Funded Light Rail on Woodward!
Downtown Adjacent: Dupont Circle
Vancouver’s West End
5 Types of Regional-serving Walkable Urban Places of Commerce (examples developed since 1990)

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Suburban Town Center: Bethesda, MD
Suburban Redevelopment: Ballston – Arlington, VA
Suburban Green Field: Reston Town Center – Reston, VA
Suburban Redevelopment: Belmar – Lakewood, CO
Observations on Metropolitan America—Bad News

- Structurally overbuilt fringe real estate which the market does not want and can not afford (7%/0%/14% in Atlanta; 24%/0%/43% in LA)
- Sub-prime (3-5% of all mortgage debt) is a warm up for the slow-motion collapse of fringe drivable suburban development (10-20%)
- The *structural* overbuilding of the wrong product in the wrong location is the reason for this financial crisis
- Climate change legislation will raise energy cost even more, further accelerating this trend
Observations on Metropolitan America—Good News

- Pent up market demand for growth of existing & hundreds of new regionally significant walkable urban places; majority anchored by rail transit

- Walkable urban infrastructure is vastly cheaper per unit or per square foot than drivable sub-urban infrastructure—1/5th to 1/10th per sq ft

- Potential for Value Capture: SE DC land: $10/foot to >$700/foot in 5 years due to rail transit/management

- We are learning how to building walkable urban places
Drivable Sub-urban Cash Flow (Red) Characteristics VS Walkable Urban Cash Flow (Blue) Characteristics
Taming Gentrification: Using Value Capture to Pay for Capital & Possibly Operating Costs for Transit

Ian Carlton, UC Berkeley thesis
So…what should the U.S. do next?

Remember: *Transportation Drives Development*
Transportation for America (T4America) is a growing and diverse coalition focused on reforming the national transportation policy in 2009. Our reform will take America into the 21st century by building modern infrastructure and healthy communities where people can live, work and play.
• Reconnecting America (co-chair)
• Smart Growth America (co-chair)
• Action! For Regional Equity
• America Bikes
• American Public Health Association (APHA)
• Apollo Alliance
• **LOCUS: Responsible Real Estate Developers and Investors**
• **National Association of City Transportation Officials (NACTO)**
• National Association of Realtors
• National Housing Conference
• BOMA
• Natural Resources Defense Council
• PolicyLink
• Surface Transportation Policy Partnership (STPP)
• Transit for Livable Communities (TLC)
• US PIRG
• **Research Support: Urban Land Institute & Brookings**
Key Issues for 2009
Transportation Bill

• System is broke and broken; few public dollars which need to be leveraged by private $
• Transportation planning should be at metropolitan level that reflects the unique metropolitan economy
• Mode neutral—no bias toward any one mode
• Focus on maintenance of existing system
• Need for new national high speed rail system
• Drive private finance for capital and operations of rail transit
• TOD Tax Credit and Infrastructure Bank for credit enhancement
Why Transportation Matters to Real Estate

- Real estate and the infrastructure that supports real estate represent 35% of the assets of the country
- Transportation drives development
- Real estate developers and investors have not been at the table to discuss the Federal transportation system in the past
- The market is demanding a transportation program that offers choice
- With the economy & real estate in crisis, total transportation reform can get both growing
The Stars Seem to be Lining Up for Reform so…

LET’S TAKE IT AND RUN
References:

- [www.cleinberger.com](http://www.cleinberger.com)
- [www.brookings.edu/walkableurbanism](http://www.brookings.edu/walkableurbanism)
- [www.t4america.org](http://www.t4america.org)